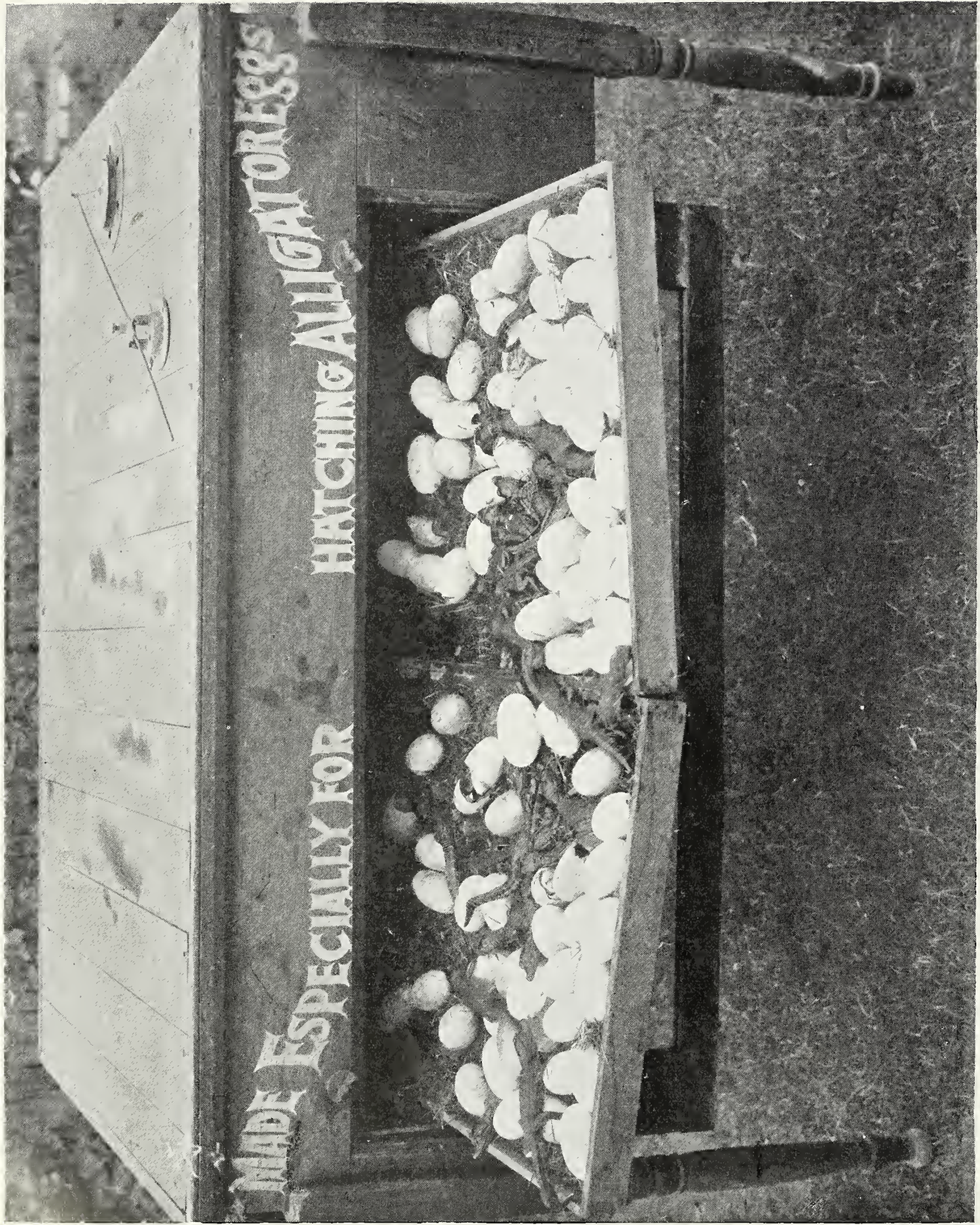


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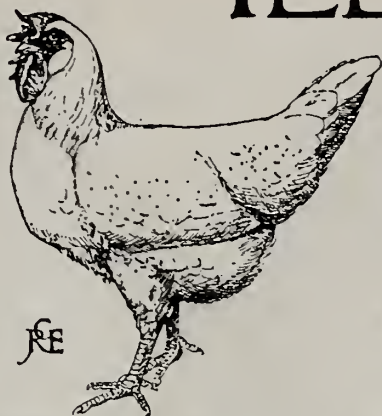
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AN UNUSUAL KIND OF INCUBATOR.
A Photograph taken on the California Alligator Farm.

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THE ILLUSTRATED POULTRY RECORD



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EDITORIAL NOTICES.

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The Editor will be glad to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

The Annual subscription to the ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to the ILLUSTRATED POULTRY RECORD.

The ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor. The latest date for receiving advertisements is the 20th of the month preceding date of issue.

The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser he is requested to communicate at once with the Editor.

The 1911 Statistics.

On another page of the present issue we quote the figures from the "Review of the Poultry Industry for 1911," of which we believe this is the seventeenth sent out by Mr. Edward Brown, F.L.S., summarising the events of the previous twelve months. A look over these annual statements reveals the marvellous progress which has been made, although that is seen more in imports than in home production. In the first of these, for 1895, it was recorded that the total value of eggs, poultry, and game (for the latter were at that time separately enumerated) was £4,608,606, whereas in 1911 the total, excluding game, was £8,805,823, after deducting re-exports of foreign and colonial poultry. In addition must be taken into account the enormous increase of Irish supplies. As, however, there are no returns before 1904 of these, it is impossible to make actual comparisons, but as that was before the great advance made across the Irish Sea, it is not unreasonable to assume that these have at least doubled in the seventeen years, so that Britain is paying something like six million pounds sterling more for extraneous supplies of eggs and poultry than in 1895, which is practically twice as much. This is an indication of national prosperity, but it is also a reflection upon our own people, who have neglected a mine of wealth at their own doors. Perhaps the most striking fact brought out by the statistics is that although during the last twelve months there has been a very large increase of foreign supplies, amounting in value to upwards of £700,000, the average price of eggs imported has advanced by 5d. per 120, bringing it to 8s. 4½d. per great hundred. That alone proves what we have contended—namely, the advance in the price of food-stuffs during the last two years is more than compensated by increased prices for produce, and that

the Poultry Industry was never more prosperous or had brighter prospects than at present.

A Glance Backward

In the other part of his report, which we do not give, as it has been widely published in the weekly Press, Mr. Brown calls attention to the opportunities afforded for placing instruction and experimental work upon a higher basis by the grants made from the Development Fund for disposal by the Boards of Agriculture and Education to be utilised in county teaching and research, expressing the view, with which all will agree, that every effort should be put forth to secure an adequate share for poultry; and by the provisional offer made for large grants towards a National Poultry Institute. Reference is made to the Poultry Conference held at Dublin last May, summoned by the

A Notable Change.

Professor J. C. Elford, who has been in charge of the Poultry Department at Macdonald College, St. Anne-de-Bellvue, Canada, since its inception six years ago, which he has brought to a high state of efficiency and done much to extend the poultry industry in Eastern Canada, has resigned that position, crossing the border-line to take charge of the educational section of the poultry plant owned by the Cyphers Incubator Company, of Buffalo, N.Y., which, we understand, it is intended to develop to a considerable extent. Everyone who has noted Professor Elford's work will wish for him unqualified opportunity and success in his new position, and can congratulate the above-named company on its enterprise. At the same time, what is the gain of New York State



REARING UNDER DIFFICULTIES.

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Irish Department of Agriculture, which proved so great a success. It is stated that if the standard attained by County Armagh, in respect to the number of fowls kept, were general throughout the kingdom, we should be totally independent of foreign supplies. It is recognised that from labour unrest and other influences the year under review has been specially difficult, and also from the shortage of winter supplies, resulting in abnormally high prices for eggs, a question which has not yet been seriously dealt with by the great majority of home producers, to their own loss. References to the establishment of a British Poultry Federation, to the proposal for taking more strenuous steps to improve and increase table-poultry, and to the need for greater attention to turkey-breeding, complete what is an encouraging and interesting review of the year just ended.

is the loss of Canadian poultrymen. His place will be difficult to fill, but we may hope that there is someone in reserve who will continue his work there with equal success. Professor Elford is this year President of the American Association of Instructors and Investigators in Poultry Husbandry.

"More Common Sense and Less Wire Netting."

Such appears to have been a pithy sentence delivered by Mr. John H. Robinson, Editor of *Farm Poultry*, at the Orono meetings last summer, but which has not come to our notice before. It contains a large amount of truth, and had that been observed multitudes of failures in poultry culture would have been avoided. What is meant evidently is that instead of small runs and restricted range the poultry should be scattered as

widely as possible over the land. Not concentration, but dissemination should be the guiding principle for all who can possibly attain such an ideal. The fact undoubtedly is that money expended needlessly upon wire netting is absolute waste for farmers and others, save under exceptional circumstances and for special purposes. But to the specialist, the cottage, or suburban poultry-keeper this material is indispensable in that it enables him to accomplish what would be otherwise impossible. In an old thickly-populated country methods have to be adopted which are unnecessary in a newer land, and experience has shown that where hygienic principles are observed intensification of method can be carried out successfully on a modest scale. What was probably meant by the sentence quoted is that as a commercial proposition the wider the range the greater the success, and the lesser the cost of

in the food cost. To bring it down under the proverbial penny per week would mean greatly enhanced profits all round, and this lessened expense is specially important at the present time. Returning to the arable land question, it is probably not an exaggeration to say that the number of fowls kept on small occupations could be doubled by the adoption of this method.

Retail Prices and Producers' Returns.

The margin between the rates at which farmers and others in many sections of the country sell their eggs and poultry and those charged by retailers in the great centres of population is frequently very wide. The meaning is that either producers are not receiving an adequate share or that consumers are paying too much. Perhaps, however, both are equally true. Intermediary charges and profits there must be, and though



AFTER THE SNOWSTORM.

[Copyright.]

the establishment, labour, and maintenance. With that all must agree.

The Way of Intensiveness.

Hitherto, in this country at least, the greater part of poultry-keepers have in action appeared to prefer grass to arable land, and where the range is a free one that is always useful. Some time ago an article in the *Record* told that such is not the case in Western America, where great developments have taken place within recent years. We have sufficient experience in this country on a small scale to show that more poultry can be kept on dug or ploughed land without fear of contamination than is possible on pastures. The article by Miss Galbraith in the present issue is a valuable contribution to this question, and we commend a careful study of it. The belt of grass is an excellent idea, for by such combination the advantages of both are secured. What will probably appeal to poultry-keepers mainly is the reduction

these may be minimised by better organisation, they will always remain. When we find that whilst eggs are purchasable in rural centres, as was recently the case, at 1s. 3d. per dozen, and selling in London at 2s. 3d. per dozen, there is no justification whatever for either one or the other. If the former was the fair value 1s. 9d. should have been the retail price, or if the latter was fair the producer should have obtained 5d. to 6d. per dozen more. One point requires to be emphasised—namely, that unduly high retail prices depreciate rural values by reducing the demand. Mr. W. F. Bullock, writing in the *Daily Mail* from New York, tells of how housewives in some of the American cities, under pressure of the difficulties arising from the rapid rise in food prices, have protected themselves by combination. They have refused to buy certain classes of food, with the result that prices were rapidly lowered. In other cases they have formed buying clubs, the effect of which has reduced the cost by 25 to 60 per cent.

PERMANENT ARABLE LAND FOR POULTRY.

By MISS A. S. GALBRAITH.

IN planning a farm the poultry-keeper, like John Gilpin, has to take thought as to the best manner in which "to keep the balance true." Indeed, there are several balances to be struck, but the most important in this moist climate is the natural one of animal, vegetable, and mineral, as the old children's game has it. It is, perhaps, a little difficult to the city dweller, who does not understand the soil, to realise how imperative such an understanding is towards permanent success in poultry-rearing on farms, large or small.

Some time ago Mr. Edward Brown described various ways of using arable land for the poultry, all useful in preventing disease and helping to keep down the cost of production, but there is another method that I have adopted, as it seemed to me to bring a maximum of good things with a minimum of drawbacks. For when deciding which system would best suit my own needs and capacities I found myself engaged in a mental problem as bewildering as that of crossing the river with the fox, the goose, and the bundle of hay. If the houses were moved about the grass that would mean small houses, no scratching-sheds, and much hired labour; if left in one place the land would grow foul; while if double pens were used there was the enormous outlay in capital and half the land always lying idle, if it were grass. And if the whole of the laying hens were to be run on one or two acres for one year, with a complete removal of houses, wire, and birds at the end of that time, there was the wear and tear and cost of labour again to consider, and the land carrying only one crop at a time—that is, the whole rent chargeable to the fowls. None of these plans suited me, for it may have been greed, but I tried to think it was only common sense that led me to demand a greater return from the soil. I wanted it, or nearly all of it, to be rent free for the poultry. This was easily enough managed in the breeding-pens and chicken-runs, quarter-acre plots with black currants, gooseberries, and other crops, but my stock had overflowed these, and the layers—which, by the way, were also the chief breeding-stock for egg-production—required more space. Having finally decided to erect large permanent scratching-sheds—houses to hold twenty to thirty hens, and provide ample shelter for day accommodation, as well as roosts—I solved the problem by simply enlarging the scale and keeping to the plan that had answered so well for the chicken-runs. But fruit bushes and trees did not

seem to be quite the ideal for permanent heavy stocking, for one cannot turn over the soil deeply right up to the stem, and the birds sit close under the sheltering bush, thus fouling the ground considerably, to the great benefit of the fruit; therefore the big sheds were placed 60ft. apart in a double row on ploughed land and have never been moved. In order to ensure a maximum of sunshine and to keep the birds evenly distributed, the centre only of the meadows was occupied by plough land and houses, and grass left north and south. Thus while each bird had access to the whole if she so desired, in effect each little colony kept near its own house, ranged over the acre or two in a direct line with it, and, each crossing the grass dusted in the hedgerow belonging to their appropriate portion. It was very curious to see how the birds adopted this course, those in the front row of houses using the land directly in front of them, while those in the back row rarely trespassed, but foraged over the grass at the back of their houses, although they had to jump over a three-foot turf wall to get at it; and the flocks from the different houses rarely mixed except at the afternoon meal. But this grass-land the birds only used for grazing excursions of short duration, dividing their time fairly evenly between the arable land and the hedgerows in summer, while in bad weather a great deal of time was spent in the deeply-littered sheds. As grass is one of the best of green foods, provided the right grasses are grown, an effort was made to keep a portion always available even in hay time, and this was done by allowing a small plot of the tilled land to revert to grass, the coarse twitch having been first thoroughly cleared out. The meadow portions were thus left clear for the mowing machine. I have seen birds kept where they could have a run on the ploughed land if they wanted, but the grass was nearest home, and this, to my thinking, is the wrong way about. For the object in having the arable land is threefold—to prevent the ground round the houses from becoming foul, which object can scarcely be accomplished if the plough land is two acres away; to do away with the needlessly chilling foot-bath provided by the wet grass slushing round the birds' ankles every time they step over their threshold; and, lastly, to provide food, both animal and mineral. In addition to this, the desirable double crop is available, and one has potatoes, &c., for sale, as well as sufficient roots to supply the hens

throughout the winter. There is no wear and tear to the houses beyond that of weather, and the labour bill for the land is returned by the vegetable crop. By thus raising so much of the food on the spot, I have found the food bill much reduced and have succeeded in keeping it slightly below a penny per bird for the year, although I had no stubble available, and supplied two good feeds daily, meat in winter, and a perpetual box full of dry meals and clover. At this cost the birds laid satisfactorily, and, whether owing to the style of life, or the kinds of food supplied, or the breeds of birds used, or perhaps owing to the combination of all, they refused to grow old, looking as fit

weeding, &c., were carefully done, it being imperative that the weeds be cleared away at once, and not left to form litter for the birds to scratch in, after the slovenly manner of work so dear to the heart of the Surrey labourer. Further, the birds must be kept well supplied with succulent green food while the growing plants are young and tender, later they have no attraction for hens, who do not care for coarse green food. A good plan is to put in a row here and there of some food they are particularly fond of—rape, “spinach-beet,” or swede.

There is no reason why the general farmer should not place fowl-houses along the headlands



One of nine Tolman Houses placed at intervals of sixty feet along arable land, showing turf bank thrown up for protection against north wind. The wire near hens was temporarily erected to support scarlet runner beans, of which there was a good hedge. It in no way confined the fowls, who have at all times free range over arable and grass. Artichokes grow close up to houses, potatoes, beetroot, mint, etc., occupying the rest of the plots. In order to provide fresh green stuff when the hay is long and coarse, a small plot of grass is left close by each house.

[Copyright.]

as pullets for years. In fact, I have known a fancier sell my three-year-old birds together with his own year-olds, and no one could have detected the difference.

In cropping, my object was to provide shade and shelter for the fowls as well as to grow a profitable crop of vegetables. So the houses were surrounded by a permanent crop of Jerusalem artichokes, growing right up to the walls of the houses, and beyond that potatoes, parsnips, beet, carrots, celery, and leeks were the chief vegetables grown. These were always successful if

of his potato fields and in many other places. Especially I should recommend that the young chicken be run on the young swede and turnip crops. I have saved many a rod from turnip-fly in this manner, and eventually got an unusable piece of ground completely clear of it for years. Indeed, the good the birds do among the crops is incalculable, and far outweighs any damage the hens may commit by trampling and scratching, and, of course, the larger the area the less of this there is, particularly if they can get to the banks and hedgerows for dusting.

THE PROFITS FROM A 15-ACRE POULTRY-FARM.

By J. STEPHEN HICKS.



IN a recent issue of some journal that should have known better there appeared an impossible article setting forth an inflated statement of the profits that might be expected from poultry-farming, regarded from a fancy point of view. With graceful flourishes of the pen (doubtless) the writer jotted down, among other items on the credit side of the balance-sheet, "By sale of 100 cockerels, at £5 each, £500." Further comment on the part of the sane would be superfluous, and, needless to add, it is the perusal of such statements by the novice that has done so much to hinder the progress of our pet industry, by strewing its path with failures due to incompetence and inexperience.

However this may be, it is certain that the beginner, not without a certain amount of reason on his side, invariably asks his mentor what amount of income he can derive from poultry-farming should he take it up as a means of livelihood. The question is usually parried or answered in the vaguest way by such a remark as, "Oh, anything from £100 to £500 a year," all of which is, of course, eminently unsatisfactory to the seeker after information, if he be a thinking man. The fact remains, however, that it is an extremely difficult matter to get reliable information as to their actual receipts and profits from breeders, either because they do not keep accurate accounts, or from an irrepressible tendency to exaggerate figures.

It is, therefore, with a great deal of diffidence that the writer of this article is endeavouring to put forward and analyse the balance-sheet of a poultry-farm, the owner of which runs other side issues that go hand-in-hand with poultry-breeding.

The following figures are supposed to be those of a man who is of average ability, who has been in the business at least four years, who rents some 15 acres, who breeds a popular variety or two, and has been successful at exhibiting birds of his own breeding, without necessarily being at the top of the tree, and has just experienced an average year (for it must be strictly remembered that with all branches of farming and the rearing of live stock there is the ever-present possibility of bad seasons and disease to be reckoned with and guarded against). There will be in the statement no attempt at minimising expenses or inflating receipts, and the figures for foodstuffs and appliances, &c., are all based upon present prices, while for the rest the writer is relying entirely upon his own experience, or, in the case of one or two items, upon that of personal

friends whose data may be taken as absolutely reliable.

Statement of twelve months' working expenses and receipts:

Dr.

	£	s.	d.
To food account	125	0	0
„ labour account... ..	60	0	0
„ appliances account	15	0	0
„ advertisements account	50	0	0
„ rent, rates and taxes account	35	0	0
„ cartage and carriage account	15	0	0
„ printing and stationery account	15	0	0
„ bad debts account	5	0	0
„ general expenses account	20	0	0*
„ 5 per cent. interest on capital (£500)	25	0	0
„ 10 per cent. depreciation of plant (£250)	25	0	0
Balance—profit	170	0	0
	£560	0	0

Cr.

	£	s.	d.
By sales of stock, 650 at 10s. each	325	0	0
„ „ „ sittings, and market eggs	100	0	0
„ profit on re-sales, foods, coops, &c.	20	0	0
„ fees for judging, visits, &c.	10	0	0
„ profit on pigs (4 breeding sows)	30	0	0
„ „ „ six hives of bees	3	0	0
„ „ „ six sheep	4	0	0
„ „ „ two acres bush fruit	8	0	0
„ sales of hay and odd garden produce	25	0	0
„ increase in value of stock and goodwill	25	0	0
„ odd receipts, rebates, &c.	10	0	0
	£560	0	0

We must now take each item in the statement separately in order to explain how the figures are arrived at, and starting with the food account on the debit side, we find that £125 has been spent as follows:

	£	s.	d.
80 stock birds fed the whole year round at 7s. a head	28	0	0
150 young stock reared to the age of 5 months, 21 weeks, at $\frac{3}{4}$ d. per week (roughly) each	10	0	0
300 young stock reared to the age of 8 months, 34 weeks at 1d. per week each (roughly)	42	0	0
200 young stock reared to the age of 10 months, 43 weeks, at 1 $\frac{1}{4}$ d. per week each (roughly)	45	0	0

This is allowing for generous feeding (including litter and grit) and also for the up-keep of a stock of breeders quite sufficient to produce the 650 young stock sold, especially when it is remembered how much cheaper it is to buy foodstuffs in the bulk such a quantity of stock would require. Sixty pounds allowed for labour will provide for a man at 15s. and a boy at 6s. a week all the year round, and leave £6 or so over for extra hands at busy times. It should, moreover, be pointed out that if the owner looks after his birds himself, as he should, there will be ample time for the regular hands to do house, garden, and other work connected with the side branches of the farm.

The £15 put down for appliances is not strictly speaking just, since anything new, bought or made, goes to swell the value of the dead stock, and we have debited an amount for depreciation lower down; still, repairs, &c., will swallow a good deal of the sum allowed.

Advertisements are, of course, a matter for individual judgment, but it is obvious that a certain amount of advertising, in one form or another, is essential to the success of every business; £50 will allow of a well-displayed and regular advertisement in, say, three specialist journals, and will leave something over for an occasional illustrated interview or extra "splash."

Rent, rates, and taxes have to be paid (unfortunately) by most of us, and one can obtain 15 acres of suitable land with convenient buildings in most localities for £20 per annum. This leaves £15 to pay for rates and taxes, and though we are not including rent for a dwelling-house (a private matter), there should be £7 or £8 balance from the £35 allowed to go towards this.

The amount of £15 debited for cartage and carriage will mostly be spent with the railway company. Printing and stationery is an item that must not be overlooked. Fifteen hundred copies of a tasteful list, produced annually, will cost something like £10, and this leaves £5 to spend on notepaper, labels, cards, a circular or so, envelopes, and other business necessities in this line. Bad debts should be, of course, avoided, but even the most careful of us get "let in" occasionally, and £5 is not too much to debit on this count, year in and year out. General expenses include stamps, telegrams, tips, and the hundred and one odd things that crop up during the year, that one doesn't think of at any given moment, but which, nevertheless, "tot" up to something like the amount given—£20. The last two items speak for themselves, and are necessary, business-like deductions that ought to be made annually from the profits. The amount might well be invested and kept as a sort of reserve fund against a bad season or seasons. This sum must also be

understood to cover the few deaths that will occur on a well-managed farm.

Turning to the credit side, and taking sales of stock first, 650 during the twelve months is no very great output, and most breeders of repute agree with the writer in putting down ten shillings per head as the average sum received (though some few think this a low figure) when the wasters are reckoned in the total, as well as the pick of the flock, which bring in anything from two to twenty pounds apiece. To analyse this item more closely we will roughly figure out prices obtainable (and these I have culled direct from a friend's books):—

Four birds at from £10 to £20 each	...	
Three birds at from £4 to £8	„	...
Thirty birds at from £1 to £3	„	...
Seventy birds at from 10s. to £1	„	...
300-odd birds at from 7s. to 10s.	„	...
200-odd birds at from 3s. to 6s.	„	...
} Totalling roughly £325 for 650 head.		

Sittings are easily disposed of at certain seasons if there is any name behind the strain, and an average "take" should run something as follows (including day-old chicks):—

Thirty orders at £1 1s. and £2 2s. doz.	say	£50	0	0
Twenty-five orders at 10s. doz.	... „	12	10	0
One hundred orders at 5s. doz.	... „	25	0	0

and it will not need many marketed eggs to make up the £100 required.

Profit on re-sales consists of orders for stock birds not bred on the farm, sales of chick and other foods, commissions on agencies and the like, such as the majority of poultry-farmers receive.

Most breeders of any repute obtain one or two judging appointments during the year, or are called abroad to plan out farms, give advice to novices, and so forth, for which £10 is not a too-generous estimate by any means.

We now come to the side-lines, and dealing with pigs, the cost of keeping four breeding sows for twelve months is, roughly, under £20. Allowing only eighteen piglets per sow per annum and selling these when weaned at only 14s. each (a low price), we have a gross earning of £50 8s.

Bees are useful and profitable insects, especially where fruit is grown, and with little trouble and outlay six hives can be depended upon to earn ten shillings apiece clear profit.

The sheep come in very usefully to keep the crop of grass short after haytime, and if bought lean early in July and fattened up for a month on cake and bean-meal, about Christmastime, they will have served a useful purpose, not to speak of manuring the land. The writer has bought lean sheep for 10s. a head, treated them as above, finally selling at 30s. each, so that £4 profit, as allowed, will provide against the death or loss of a couple!

An apple orchard planted with bush trees or paradise stock will show a good return when the

trees are six years old, besides providing pasture for bees and protection for chickens. Returns from fruit are, however, invariably uncertain and problematical, but it must be a poor year indeed when £4 profit per acre is not obtainable.

Thirteen acres of meadow-land, upon which poultry have been running, should easily produce seven tons of really good hay, saleable in the stack at £3 a ton; and it will not need very many potatoes, tomatoes, and other garden produce to make up the odd £4.

Each succeeding year a man is in the fancy his name gets better known and thus adds to the value of his goodwill. His strain, too, by careful breeding, becomes more and more reliable; his appliances, fixtures, and fittings more up to date; his orchards more remunerative; and his experience greater. Hence the £25 credited for increase in this direction. The last item embraces all the odd shillings and crowns collected during a twelvemonth in various little ways—the hire of a store-room, the incubating of some farmers' eggs, the loan of a brooder for the season, a bushel of walnuts, preparing a novice's birds for exhibition, a prize for a photograph, 1,000 cabbage plants—to name only a few of these incidental receipts as examples.

And now all's said and done the reader will probably say to himself that £170 profit from such a holding is nothing to boast about. True, but then it must be strictly remembered that while all

through the list, expenses have been put down in full, the takings have been credited rather below than above the average mark, since we have been considering the case of a man who has not been going more than five or six years, and who has not yet probably nearly reached the zenith of his career. Then, too, no allowance has been made for that popular adjunct to most poultry-farms—the paying pupil. Though it is to be feared that some rely more upon an income from this source than from their farms, there is no reason whatever why this class of man, whose balance-sheet we have been discussing, should not add a gross hundred or two to his income by receiving, and properly training, the young idea. Finally, provided he is resolved on a perpetually progressive policy, there is every reason for the right man to expect a yearly increase of £25 profit, after his sixth season or so.

N.B.—In the above account it will be noticed that nothing is credited or debited for showing, feathers, or manure. In the first place, there might be a small credit balance of prize money over entry fees, but even with the successful exhibitor this does not amount to much. Feathers are saleable better in theory than in practice, and we do not suppose the average fancier makes a shilling a year from this source; probably his wife uses the feathers for the household. Manure, too, is generally consumed in the home garden, making the likelihood of greater profit in that direction.

BREEDS AND IDEALS.

By WILFRID H. G. EWART.

IT has always struck me that in connection with poultry-breeding, for exhibition purposes, more credit is frequently given to breeders of certain varieties while due credit is withheld from breeders of other varieties. For instance, how much greater a triumph to produce a very good Buff Orpington than a Black of the same quality. In the former case you require all the difficult general characteristics of the breed, but in addition you must produce a most intricate colour—clear, deep, and sound everywhere. The average winning Buff Orpingtons at second-rate shows are not very high-class specimens. If they excel in type, they invariably fail in colour; if their colour is good, they are usually small, light in type, or flat-fronted.

In considering this question of breeds and their ideals, let us look for a moment at the tendencies either way—from or towards those ideals—let us look at the typical birds as they stand in the showpen. Speaking particularly of Buff Orpingtons, how often do we see specimens of really good

type? As regards the average second-rate show—very seldom. Cocks are, as I have said, flat-fronted and often long in body; or else they lack size. Hens show better type, but the square short bird is rare. We see instead long bodies, straight backs, and a sad absence of cushion. This, of course, is due to the fact that nine judges out of ten go straight for the best coloured bird, since, for all practical purposes, colour counts eighty per cent. Perhaps size is the second consideration, then type.

This judging, according to a private standard, may have its merits. It rather negatives the official standard. But what now of Black Orpingtons? Here we find type all the rage—that is to say, I doubt whether a bird excelling in colour, but seriously lacking in shape, stands any chance in strong competition. But, then, Black Orpingtons set a tremendously high standard. Practically perfect specimens of the breed are not uncommon, and, therefore, in determining the prize-lists much depends upon minor points such

as the eye. Often a big show has been won by the fact that of two competitors one had almost imperceptibly darker eyes.

In Wyandottes we find far more vigorous demands—more vigorous because less frequently fulfilled. I should say that the most perfect of the Wyandottes is the Partridge, the least perfect—I do not include those which are varieties only in name—the Black. Partridges are, in my view, one of the most genuine triumphs of the fancier's art. They present many stumbling-blocks, yet these have been overcome and to-day we see cocks of grand type—rather inclined to thigh, perhaps—wonderfully sound in breast, hackles, and tail, and showing more vivid colour than any other breed of poultry; hens of true Wyandotte character, yet excelling in colour, and a wonderful

a dozen. Type has much improved in cocks, but head points are as bad as ever.

In pullets we find lack of size and moderate leg-colour, while in hens rusty undercolour and ticked cap are outstanding faults. Still—as anyone will agree who has visited the last two club shows—hens stand out above the rest of the variety.

It is the same with Whites. In hens we have achieved practically perfection; pullets are good; cocks and cockerels vary much. But how often do we see one of the latter with a really standard comb? This is where our White Wyandotte males fail. Coarse, ugly heads are too often seen; or, failing that, we have the small, neat comb without work in it. Then there is the outstanding leader, and (worst of all) the double or triple leader. Type is more often faulty than



THE POULTRY YARDS AT LANLIVERY SCHOOL.

See next page.

[Copyright.]

pattern of pencilling which might be thought hardly attainable in a living creature.

The Black Wyandotte, while showing just that variation in quality which might be expected of a new production, has, however, hardly made regulation progress towards the ideal. Last summer I attended an agricultural show of some importance at which a class for Black Wyandottes was provided. The quality fell so far beneath standard that there was hardly a fault which could not be found with the winning hen. Better could be found in the class, but the best of the lot was a utility specimen worth, perhaps, seven-and-sixpence. One thing, Black Wyandottes are usually easy enough to judge. How often nowadays, after five years' work, do we find cockerels really sound underneath? I can recall, perhaps, half

colour—by type, I refer chiefly to straight-backs and flat-fronts in hens, length of thigh and lack of depth in cocks.

Turning to Barred Plymouth Rocks, we find, on the part of breeders, a curious disregard of the official standard. We find, it is true, a wealth of beautiful barring, and blue, steel-blue, ground-colour. To these, however, admirable as they are, the other chief characteristic of type is entirely sacrificed. Instead of the broad and massive birds of a decade since, we are confronted by great height on leg and a pitiable narrowness behind, with a correspondingly pinched front. Of course, so far as barring and type are concerned, you cannot "have it both ways," but it may be assumed that that ideal which stands for utility is best worth aiming at.



POULTRY IN ELEMENTARY SCHOOLS

How Cornwall is Leading the Way

[Copyright.]

By EDWARD BROWN, F.L.S.



MUCH talk has been expended upon the subject of rural education. The need for making the teaching of country children bear some relationship to their future life is generally recognised. Instead of setting lessons purely concerned with commercial pursuits—thus turning thoughts at the impressionable age away from rural pursuits—what should be done is to teach that which, so far as possible, can be immediately demonstrated and is capable of application on the spot. Something has been done in connection with school-gardens; but, so far as I am aware, until recently poultry-keeping has not been so used. It has remained for a Cornish schoolmaster, Mr. R. R. Blewitt, of Lanlivery, near Lostwithiel, to set an example which I hope may be copied all over the country. It is often the beginning that is most difficult.

The evolution of this interesting and suggestive experiment is worth the telling, as recounted to me on a recent visit to Lanlivery. Mr. Blewitt has been there six years, for a considerable portion of which time he has been a poultry-keeper. Feeling the importance of giving an agricultural bias to instruction, three years ago he began to form a school-garden, using the forecourt of the school for the purpose. The boys cleared and cultivated the ground, and he found, so deep was the interest awakened, so helpful was the work to his ordinary lessons, that he was led to apply to

the County Education Committee for extended opportunities. As a result, an acre of land has been taken behind and adjoining the schools at a rent of £3 per annum, and laid out partly for cropping and partly for poultry-runs. The ground plan shown herewith explains the arrangement for the last-named. The boys have erected the fences, made and put up the gates, and laid out the paths—of course, under Mr. Blewitt's supervision—and the work is well done. The capital cost for the poultry section has been about £10. This does not include stock, which has been bred up from the master's own birds. The ground is light, thoroughly drained, and favourably situated, so that manure does not remain on top. Although this new development was only commenced in September, something had been attempted before. For instance, last year Mr. Blewitt used an experiment in rearing chickens to ascertain the cost of food and weights attainable. The boys had to keep accounts of foods consumed and work out the details in their arithmetic class. In fact, all the arithmetic taught is based on farm work and rural pursuits. As was pointed out, in six years thirty-five children have left the top class, of which 85 per cent. remain in the country, so that such teaching, when general, should profoundly influence the next generation.

The pupils included in this practical side are

mainly boys, eleven years of age and upwards, so that they are not put to it too soon. The girls help with bees, and it is intended to develop a section for flower culture specially for them. Whilst the lads are busy with their lessons the girls are giving attention to domestic economy. Three hours per week are devoted to what may be termed rural science, inclusive of poultry, and one hour per week to rough carpentry, in which hatching-boxes, coops, &c., are made. Some of those which I saw were really excellent in every way. Materials generally available are employed so as to reduce the cost. For instance, a really well-designed and made double-hatching box with runs is constructed out of a Cadbury cocoa packing-case. In addition, however, other lessons are brought into service. Some of the pupils have, in their drawing classes, made most commendable sketches of fowls, runner-beans, flowers, &c. Mr. Blewitt informed me that he had all through been greatly impressed by the keen interest displayed in respect to breeds of animals and birds. He has a supply of "British Breeds of Live Stock," issued by the Board of Agriculture, of which he speaks very highly, and says that this is a most popular book with the lads. He took several of them to the last Bodmin Poultry Show, and records that there were few of the breeds which they did not at once recognise. The special readers used are (1) the work just named; (2) the Board of Agriculture leaflets; and (3) the "Record Poultry Book," which latter is specially employed for teaching management.

The syllabus drawn out for this school is as follows:

THEORY.

Anatomy of the fowl.

Breeds of poultry. Table: Dorking, Indian Game, Sussex, Old English Game. Layers: Leghorn, Minorca, Ancona, Andalusian. General

purpose: Wyandotte, Orpington, Plymouth Rock, Langshan; with descriptions of each.

General management of poultry, from the egg to maturity, with practical work.

Artificial and natural incubation and rearing.

Feeding for special purposes—flesh and eggs.

Winter egg-production.

Poultry foods (albuminoid ratios are worked out in the arithmetic lessons).

Poultry diseases.

Poultry pests: How to keep them away and to get rid of them.

Housing of poultry.

Poultry manure: Its treatment and value.

The principles of selection in poultry culture.

The necessity for cleanliness.



MR BLEWITT'S POULTRY-YARD. [Copyright.]

PRACTICAL.

General management (as above).

Making chicken coops.

Building a poultry-house.

Making poultry troughs.

Making drinking fountains.

Making brooder (if possible).



POULTRY APPLIANCES MADE BY THE BOYS. [Copyright.]

It is intended this next season to hatch a considerable number of chickens both by hens and an incubator and to kill off some of the birds when ready. Every stage in the process will be studied, and lessons based upon this experience.

The one criticism which might be passed upon the above syllabus is, whether it does not include some subjects which would be better left for teaching in continuation schools. That can only be proved by actual observation. Mr. Blewitt states than one great advantage in giving instruction on so varied a basis is that the spirit of inquiry is awakened. In every way possible he desires the lads to ask him questions, finding that by this means he is able to teach them a great deal. A further point is that some dull pupils, so far as book-learning is concerned, have developed remarkably, and he is able to teach them through the practical side in a way impossible before. That is leading the way to a quickened intelligence all round. He is firmly of opinion that in rural schools the effect of this teaching will be a most powerful factor in advancing the standard of education and helping to keep on the land those who are already there.

It must not be thought that other studies are interfered with, as the time devoted is strictly limited. That is insisted upon by the County Education Committee and Board of Education's Inspector, all of whom are taking a very keen interest in what is being done at Lanlivery. I am, by courtesy of Mr. Blewitt, able to give the timetable adopted:

WINTER TIME-TABLE.

FIRST CLASS (Standards V., VI., and VII.).

MORNINGS.

Arithmetic	9.45—10.25
Composition	10.25—11. 0
Reading	11.15—12. 0

AFTERNOONS.

Day.	1.35—2.40		2.50—3.20
Monday	Science	Recreation, 2.40—2.50	*Gardening (Boys) Needlework (Girls)
Tuesday	Geography Physical Exercises		Music Drawing
Wednesday	Science		*Gardening (Boys) Needlework (Girls)
Thursday	History Physical Exercises		Woodwork (Boys) Composition (Girls) Drawing
Friday	*Gardening (Boys) Needlework (Girls)		Science Physical Exercises

* Inclusive of Poultry and Bees.

In the Summer Time-Table is allowed four hours per week for Gardening, Poultry, and Bees. At that

period History is dropped altogether. In the winter, if weather is unfavourable for Gardening, Woodwork or a Science Chat is substituted.

The most scrupulous care is taken with regard to expenditure and receipts, and as one object is to demonstrate what can be accomplished on an acre of land by intensive methods, the work is carried out on strictly commercial lines. This is highly educational, and the financial results will influence the County Council as to extension of the system. Therefore, nothing in the shape of experimental work ought or will be attempted. As a consequence, saleable products are all-important. So far as eggs and chickens are concerned, there is no difficulty in that direction. In respect to garden stuffs, such is not quite so easy, but that has been considered. The question of marketing is, therefore, a prime factor. In this direction a great change has taken place in Cornwall within the last few years. I can remember seeing eggs sold in Bodmin Market as low as twenty-seven for a shilling in the month of April. Now comparatively few go there, as they are mainly collected by what are called regrators, who call regularly at the farms and buy up their supplies. In the cheapest period eighteen for a shilling is regarded as very low indeed, and it is seldom that price is reached. This may not be the best system, but it is a vast improvement upon former methods. Chickens, &c., can also be sold at fair prices. Part of this advance is due to the upward tendency all over the country, but more is attributable to the fact that, thanks to the way in which the Great Western Railway Company has boomed Cornwall as a holiday resort, and its magnificent service from all parts of England, the number of visitors is annually increasing, creating a county consumption which means a largely enhanced sale and better prices. One further factor may be mentioned—namely, that land for small holdings is obtainable by likely men, thus affording an opportunity not always met with elsewhere.

Such is a brief account of an attempt to solve a problem which has presented itself for many years, and upon which both the Education Committee of the Cornwall County Council and Mr. Blewitt may be congratulated. Already results have been apparent. One boy undertook the grafting of fruit trees on his father's holding, which process he had learnt at school. In another case a lad and his father have erected a portable poultry-house due to the same influence. I may, however, be permitted to suggest that it would be desirable to carefully consider the type of house in use, as those now on the place are too low in the roof, and could be greatly improved at a very small increase of cost. The desirability of showing the kind of house which is to be recommended for farmers will be recognised. And the same is true with regard to all appliances used. A very

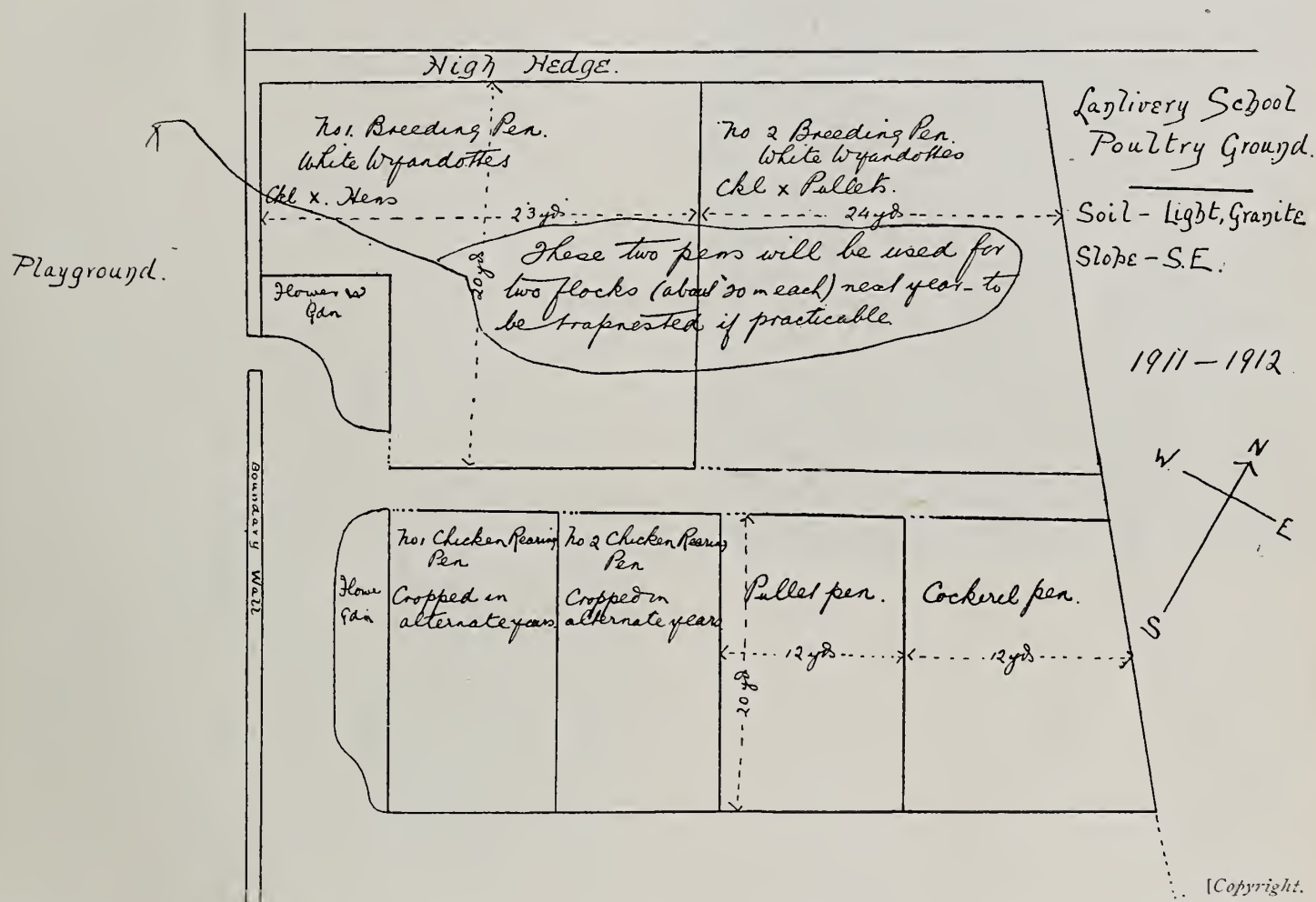
wise expenditure would be a number of carefully-constructed models suitable for different purposes, and these would help greatly in the lessons.

In the immediate district farmers and the parents have manifested great interest in what is being done at Lanlivery School. Should it prove successful, the same plan will be followed elsewhere. That, however, will, to some extent, depend upon the teachers, who must themselves take, as does Mr. Blewitt, a deep personal interest in the work. They must, like him, understand the various branches of cultivation and stock-breeding, and it is hoped that it may yet be that an indispensable part of the training of every rural schoolmaster shall be in the basal princi-

WHO'S WHO IN THE POULTRY WORLD.

MR. C. E. J. WALKEY.

ALTHOUGH the work of County Council lecturers is little known outside their own immediate areas, no more important contribution to the promotion of poultry-keeping can possibly be made. Among those who have wrought hard and well in this direction is Mr. C. E. J. Walkey, who since 1903 has been staff poultry lecturer to the Somerset County Council. Previous to that time he had acted for Dorset, Warwickshire, and Wiltshire. Born in 1866,



ples of rural economy and its practice, enabling him to enter into the needs and difficulties of the people by whom he is surrounded. It would be impossible to keep larger stock, and, therefore, poultry will almost certainly be representative of animal life in such a system. To Mr. Blewitt it is a labour of love for his profession and of desire to help his scholars to the fullest degree, not as a mere addition to income, for he has expended his own money freely in the accomplishment of his aims. It is to men like him we must look for laying the foundations and fitting the lads and lasses for greater educational opportunities soon to be provided.

he is eldest son of the late Rev. C. J. E. Walkey, for some time rector of Cornwell, Oxon, a keen cricketer and fisherman. He was educated at private schools, at the Royal Academy, Gosport, and at Dresden, Germany. After this stage was completed, he travelled upon the Continent, in India, and lived for nine years in South Africa, gaining experience of men and places which has been, and should be still more, valuable in the future.

A poultry-keeper from boyhood, with the usual intervals, for the last ten years he has bred Salmon Faverolles and Buff Orpingtons, but more recently has devoted considerable attention to the Mantel fowl, importing from the place of origin some of the best birds obtainable. In his breeding-pen he has four

1907 hens, with individual records of 207, 213, 225, and 246 eggs respectively, which were mated with an imported cock. These somewhat small hens are wonderful layers, and very fine in the flesh. He has also



MR. C. E. J. WALKEY.

carefully studied the La Bresse, apparently having a predilection for French breeds.

For several years Mr. Walkey has been a member of the committee of the Utility Poultry Club, and was chosen as one of the representatives of that body on the visional committee of the National Poultry Institute. His other public positions are many, ranging from rifle clubs to political organisations. Lately he has made his début as an author, and his "Practical Pages for Poultry-Keepers" is one of those useful handbooks which are invaluable to the people it is Mr. Walkey's aim and business to serve.

M. ROUILLIER-ARNOULT.

TO have established the first school of aviculture in the world, and also to have invented what was probably the first practical incubator, is a record which is unique, and deserves the fullest recognition from poultrymen of every nationality. Such can be claimed by M. Rouillier-Arnoult. A native of Normandy, he was born in 1843. He was employed commercially in Paris until 1873, when, for reasons of health, he removed to Gambais, near Houdan, in the

Seine-et-Oise department, there founding the famous establishment of which an account and photographs were given in the first number of the POULTRY RECORD (Vol. I., No. 1, October, 1908, page 55). Here he began to experiment in artificial hatching and rearing, and in 1878 exhibited his hydro-incubator at the great Paris Exhibition of that year. It was this machine which revolutionised the system, for its simplicity led to development on totally different lines. Its final form was adopted in 1883, when the briquette mode of heating was introduced.

Five years later the Gambais farm was made into a poultry school, and for at least a decade it stood alone. Whilst owned by M. Rouillier-Arnoult, it has been throughout recognised and subsidised by the French Ministry of Agriculture. During its twenty-four years' history it has trained students from all parts of the world.

Not alone is the district in which it is situate famous as a great poultry centre, and as the place of origin



M. ROUILLIER-ARNOULT.

of the Houdan fowl, but also of the Faverolles, whose value M. Rouillier-Arnoult was one of the first to recognise, and it is not too much to say that it was largely due to his efforts that it was made generally known, supported, of course, by its intrinsic merits.

For the invaluable services rendered to aviculture in his own land, M. Rouillier-Arnoult has won not only the appreciation of all, but public recognition has been made, for he is Chevalier of the Legion of Honour, Commander of the Order of Merit Agricole, and vice-president of the Société Nationale d'Aviculture of France.

THE CARE OF THE SITTING HEN.

By FRED. W. PARTON,
The University, Leeds.

THE season has now arrived when thoughts turn to the annual time of hatching. A few chickens have already made their appearance in many yards, but, speaking generally, so far as economic fowls are concerned, the present time is appropriate for mentioning some of the essential points to be observed in the management of the sitting hen. First, it would be well to consider what is required to ensure—as far as can be foretold—successful results. A reliable “broody,” a suitable box in a suitable place, fresh air, plenty of moisture, good management of the hen as to feeding, &c., and attention to cleanliness are the most important points.

No hen should be set upon eggs until the owner is perfectly sure that she is beyond a doubt broody, and to make doubly sure she may be set upon “dummy” eggs for a few days before trusting her with valuable ones. Great care and gentleness are needed in the handling of a hen at this period. We are all only too familiar with the vexatious sight of taking a peep at the newly-set hen to find her calmly standing on the eggs in readiness to bound out of the box immediately the opportunity presents itself. This is frequently caused by want of a little tact in arranging these matters. Of course, the greatest amount of care in the handling of a bird will not make her take to the eggs if she is not so inclined; at the same time, gentleness in this direction will often turn a wild hen into quite a docile one, and once get her tame and accustomed to being handled, and she will probably remain so throughout the whole period of incubation, and will readily leave and return to her eggs when the daily airing and feeding work is in progress.

A good box for the hen is the next requirement, and this should be sufficiently high to allow of ventilation without the current of air playing directly on the hen. This is a part of the work that does not always receive the attention that it very rightly deserves. The embryo chickens are breathing through the pores of the shell by means of the allantois, which is a respiratory organ, comprised of a membrane formed during the first stage in the chick's development. Pure oxygen is absolutely necessary for the strengthening and the nourishment of the embryo. Neglect in this direction is frequently the cause of “dead in shell,” but this is seldom regarded as the reason. A plentiful supply of fresh air should, therefore, surround the eggs, and to this end holes about an inch in diameter should be placed at the top of the four sides of the box. If the box be made eighteen or twenty inches high it will allow of a free circulation of air without subjecting the hen to the risk of draught, since she sits low down upon the eggs, thus obviating the danger. The situation for the placing of the box depends largely upon the time of year and the condition of the weather. If the season is far advanced and the weather mild, the box may be placed outdoors—provided, of course, that no foxes are about; at other less favourable seasons a room of some sort, such as a stable or disused shed, is excellent for the purpose. It is, however, necessary that the hen should be kept apart from the other fowls, especially from the males, who seem to have a predilection in

their favour at this maternal period. An upturned sod, or shovelful of moist earth, should be placed inside the box, which need not be hollowed out saucer shape, as is usually done, since the straw of which the nest is made can be fashioned into the concave position. Straw is preferable to any other material for the nest; it assists in securing the access of fresh air, since it circulates more freely than is possible were other material used for the purpose. In this connection mention may be made of the necessity of seeing that the eggs are perfectly clean, otherwise the pores are closed and the chicken is unable to breathe; thus all measures for securing fresh air are neutralised.

There must be a certain amount of moisture provided, and usually plenty is obtained from the air, but in the dry atmosphere of a dry season there is every likelihood that the egg-shell becomes hardened, and the membrane so tough that when the time arrives for the exit of the chicken from the shell—if it survives so long—difficulty is experienced in its liberating itself. On the other hand, too much moisture may be given. Like every other branch of poultry management, there is a medium to aim for. It is an exceptional season that does not provide all the moisture that is necessary. As a matter of fact, if provision be made for a plentiful supply of fresh air—in an ordinary season—the ventilation provides the necessary moisture; if, however, more is required than the air can supply, the earth under the nest should be freely sprinkled with warm water. The plan of dipping or sprinkling the eggs is frequently adopted, and this, most certainly, is better than having no moisture at all, but by watering the earth under the straw of the nest, the moisture is more readily absorbed and drawn through the pores of the shell. Three times a week is quite sufficient for giving moisture, even in the driest of seasons.

It is imperative that the hen should leave the eggs daily in order to cool them, thus stimulating and strengthening the chicken. The exact time that they should remain exposed depends upon the state of the weather, and also upon the stage of development they have reached. During the early process, say up to ten or eleven days, a daily cooling of ten minutes is sufficient, but after this period the length of time may be gradually extended until it reaches twenty to twenty-five minutes, provided, of course, that the weather is moderately mild. It would not be wise to expose the eggs to three or four degrees of frost, for this would mean almost certain disaster. The food for the hen—which should be given when the eggs are being cooled—should always consist of hard corn, barley, or maize for preference. This is the one time in the life of a hen when it is inadvisable to give green food, for the two-fold reason that it is cooling to the blood and is too quickly digested. This latter objection also applies to the giving of soft food. The long fast between the times of feeding tends to lower the temperature of the hen's body, which must be maintained rather than lessened during the fever of broodiness. Fresh water must be given after feeding, and a dust-bath provided and so placed that the hen has ready access to it. The dust bath should consist of fine ashes or any similar material, and mixed with this there should be a little black sulphur or other vermin-killer. The greatest vigilance is needed to detect in-

sect pests, and precautions must be taken to guard against this evil. The devastation caused by parasites can scarcely be measured. It is frequently responsible for a hen deserting her nest, and is often the reason why such a small percentage of chickens is hatched. If vermin are on the hen's body they very soon transfer their presence to the newly-hatched chickens, with the result that they are badly handicapped from the very commencement, and they get a check at a period in their growth which may never afterwards be regained. Cleanliness goes further to keep down vermin than anything else; in fact, they are encouraged by dirty surroundings. The nest-box should be thoroughly limewashed, and the nest be remade after each hatch. The hen should be examined now and again, and if she is infested with vermin rigorous measures should at once be taken, since it is impossible for a hen so affected to do justice to the rearing of chickens, and this is very often the unsuspected reason why chickens are stunted in their growth, and have that dejected appearance which, unfortunately, is only too frequently seen.

POULTRY AND GARDENING.

By F. E. GREEN,

Author of "A Few Acres and a Cottage."

WITH the increase of small holdings and the added interest given to poultry-keeping during the last year or two, a few remarks concerning the close inter-relation between poultry-keeping and gardening for profit may not be out of place. That "hens are bad gardeners" is a household phrase commonly used by countrymen. But are they not sometimes good gardeners? With the vegetable gardener, pure and simple, the country saying may be true enough, and yet only true when fowls are turned out indiscriminately amid growing plants, for the vegetable farmer has much to gain from fowls, provided he turns them on to the ground at the right time—that is, when he is winter-digging and keeps them from injuring his winter greens. A ton of moist manure from twenty-five full-grown birds is not to be sneezed at where manure is difficult to obtain.

The fruit grower has everything to gain from keep-



INDIFFERENT GARDENERS.

[Copyright.]

Bad for the vegetables, but good for the fruit. Winter greens are growing between the rows.

New Zealand Eggs.

If the number of new methods of preservation is any indication, this problem should soon be solved. As yet few have proved practicable and simple. The *Otago Witness* states that a Dunedin firm has shipped home twenty-five cases, each containing twenty-two dozen eggs. This is a trial shipment, made partly to test the merit of a preservative with which the eggs have been smeared. The eggs are not being carried in the cold storage compartments of the ship, but as ordinary perishable goods.

ing poultry. Fowls pick up an enormous number of wireworms, leather jackets, and grubs of all kinds which are injurious to fruit trees, and I have no doubt that a good deal of the grease-banding of trees might be dispensed with, if fowls were turned into an orchard in October and given the chance to catch the winter moth before it ascends the stem to hibernate in the branches of the apple tree.

The difficulty, however, with most of us is that we generally grow our fruit and vegetables on the same plot of land, and while we want our fowls to peck

amongst the fruit trees in winter, we are afraid to let them do so because of the winter greens growing between them. Yet even here, if the ground be extensive enough for a few fowls to have a wide range, and one is not particularly concerned about marketing the vegetables, it may be as well to let the fowls and the fruit trees have the advantage, and chance what becomes of the vegetables.

But this depends largely upon the nature of the vegetables. For instance, in the photograph taken on my own holding, it will be seen that the curly kale, after the fowls have had some weeks of unfettered liberty around them, are growing with fair profusion. I notice, too, that where cabbages and savoy are fully grown with their jackets buttoned tightly over their sturdy hearts, fowls work little damage upon the portion that is put into the pot. On the other hand, Brussels sprouts and small greens are stripped as bare as poles, and swedes stand no chance with fowls.

It must be understood that I do not recommend this rather reckless plan of combining poultry-keeping with vegetable growing, for in every individual instance it is largely a case of comparative values; but there is an alternative, and it is to this alternative that I wish to draw the attention of all those who are about to start a mixed small holding. The alternative is to keep the fruit garden entirely separate from the vegetable garden. This I have urged before, not so much in the interest of the poultry department, but for the easier working of the land, for wherever a plough or a horse hoe can be used, it is a much more economical method of tillage to keep an open space free of fruit trees and bushes for the growing of vegetables, corn, fodder crops, and strawberries. Moreover, a thick belt of fruit trees and bushes forms a splendid sheltering fence for early vegetable crops.

Now, every cultivator of only an acre or two of land, who keeps poultry, should make up his mind at the start that, even if a part of his holding consists of a small meadow, he must invest in wire netting for the sake of keeping his birds off his neighbours' gardens, as well as off his own crops. I have known the bitterest feuds to spring up in country parishes, not through differences of political or religious convictions, but through the irresponsible roaming propensities of the sleek and inoffensive-looking hen. And as wire fencing will have to be purchased, the best plan undoubtedly is to erect movable wire pens, which can be made roughly and inexpensively by buying ordinary fourteen-foot poles and cutting these in half, or by using the thinner seven-foot ones, making a framework with four pieces and an extra one, for the sake of rigidity, fixed diagonally, each section being made separately to facilitate the moving of the entire run and to reduce to a minimum the damage done to wire and wood.

Undoubtedly the breeds that would ensure the greatest peace of mind, and, I think, the greatest profit also, to the occupiers of small properties are the heavy birds, such as Orpingtons, Faverolles, and Wyandottes.

I once asked a cottager who went in for egg-production why he did not keep the non-sitting varieties. "Because I don't want no spadgers," he sagely responded. "Life's quite full enough of worries without them." The most troublesome "spadger" I ever

kept was an Ancona, though as an egg-producer it was hard to beat.

I have dwelt chiefly on the boon conferred by the hen on cultivated land, but there is also the material advantage gained by the hen by picking up worms on freshly dug ground, for this meaty diet should certainly stimulate the winter production of eggs.

In the spring, little chickens might be allowed to roam with advantage both to themselves and to the growing crops, though a wary eye must be kept on the growth and increasing power of little legs which harrow not only the land, but also the feelings of the gardener. And if you do happen to have a bad bit of couch grass in your garden or meadow do not fail to pen your fowls thickly on that spot and let *them* do the scarifying for you. Fowls will often garden well even on the roughest of land!

THE RUSSIAN EGG TRADE.

THE hen is an important factor in Russia, as we all know, and were it not for supplies from that country prices must have advanced to a much greater extent than has been the case. In the Russian Supplement of the *Times*, issued recently, some interesting information was given respecting the Union Cold Storage Company, a great British enterprise with headquarters at St. Petersburg, which handles large quantities of eggs, &c. It was stated that: "The eggs, stacked in long, coffin-like boxes, make no particular appeal at first to the imagination, but when you see, in an upper room, four men whose never-ending business it is, with the aid of special electric lights, long experience, and deft sleight of hand, to sort the good from the doubtful and the bad, at the rate of 15,000 eggs per man per day, and when you are assured that they never (well, hardly ever) pass a bad one; furthermore, when you realise that England imported in 1909, from the port of Riga alone, some 700 millions of eggs, you begin to understand why no man has ever met with a new-laid egg in Russia, and you perceive also something of the work that hens are doing for the Russian Empire. In 1909, if we may trust statistics, the hens of Russia clucked joyfully 2,845 million times to celebrate the advent of eggs that were destined, thanks to cold storage, to leave their native land. And here, in this cold chamber, once passed as 'good,' they lie on beds of shavings, tier upon tier, in a temperature of 31° Fahrenheit, awaiting the day of profitable export. There is food for thought, as well as for breakfast, in the fact that most of the middle-class eggs that London will eat this winter were gathered last spring from homesteads and henroosts on the banks of the Volga and the Voronezh. Thus considered, the hen rightly assumes an honourable place in Russian economics. In his memorandum accompanying the Budget for 1911 the Minister of Finance refers with pardonable pride to the fact that in 1909 the export of eggs realised some seven millions sterling, and poultry another 1½ millions. Indeed, the hens of Central Russia and the cows of Siberia have in recent years done far more to maintain a favourable balance of trade for their country than all the mines of the Caucasus and the Urals."

ON MATING POULTRY.

THERE is a vast difference between the mating of stock for utility purposes and for exhibition breeding, and though an amateur may be perfectly successful in the former work by selecting stock by appearances, that plan will not answer in breeding fancy stock, because appearances are deceitful, and as a general rule a good breeding bird possesses characteristics more or less distinct from those of an exhibition specimen.

Let us, however, first consider the case of the utilitarian, to whom it is an absolute necessity to select vigorous and healthy stock birds, for without these qualities there can be no real usefulness. The most suitable hens for breeding from are not necessarily the most prolific layers, some of which, especially when forced for egg-production, waste so much energy that they are not in fit condition to produce fertile eggs, strong germs and vigorous chickens. The strongest chickens are generally bred from birds that have an unlimited range, since these keep in better condition than those that are closely confined, and it is therefore a great advantage to have breeding stock at liberty when possible. Mere size is not essential in breeding layers, so long as the birds are of fair average size, for many of the very large fowls are indifferent layers, and are, therefore, as unsuitable for breeding from as the prolific hens that expend all their energy on laying. When table birds are the object, however, size is desirable in both sexes, especially in the hens.

As a general rule, stronger germs and more vigorous and larger chickens are produced from two-year-old hens than from pullets, but whether an old cock is better than a cockerel depends entirely upon the condition. Personally, we prefer to run a well-developed, early-hatched cockerel with old hens, and believe that he will throw just as fine chickens as an old bird, whilst there is the additional advantage that he is more likely to fertilise eggs during the early part of the season, when old cocks are often sterile through delay in recovering from the trying ordeal of the moult. Unrelated males are invariably desirable in breeding for utility purposes, especially for amateurs, for the crossing of unrelated strains makes for vigour and health, and when these priceless boons are secured the utilitarian standard of one's flock can be improved by careful selection. It is unwise to trust entirely to one male bird for the breeding-pen, for accidents may occur, or he may prove inactive and valuable time will be lost.

In proportioning the number of females to each male, the character as well as the age of the stock must be taken into consideration. Among the small active breeds, such as Leghorns, a vigorous cockerel may run with ten or a dozen hens, especially if they have an unlimited range, whereas it would not be advisable to run more than half a dozen hens of the large breeds with one cock. A cockerel can generally be safely given more hens than an old cock, and then, again, the breeding-pen must be smaller during the early part of the season, and additional hens can be added as the weather becomes warmer and the male more vigorous. On the other hand, there is an objection to running a cock with only two or three hens, for if he is very active and vigorous his

attentions may have a serious effect, even to the extent of causing paralysis; for which reason one should always regard the loss of feathers on a hen's cushion as a sign that more hens are required in the pen, or else the cock should be isolated for a portion of each day.

In breeding for exhibition one must adopt quite a different principle in selecting stock for mating. The introduction of unrelated cockerels is opposed to this principle, for one can only fix the elusive exhibition qualities by breeding closely within the strain and by careful selection of the most likely stock. In-breeding, however, is merely intended to fix certain qualities, which must, of course, originally have been introduced by a system of crossing; but so far as the matter affects the amateur, if he has secured stock in which certain qualities exist, he must in-breed if he wishes to fix and develop those qualities, and if he resorts to unrelated cockerels he will, of a certainty, lose the desirable show points in his stock and cause reversion to the original defects in the parents from which his birds were bred.

The first lesson in breeding that the amateur fancier should learn is that like does not necessarily produce like. If he mated together the finest specimens of male and female he would, in nearly all varieties, produce nothing but rubbish, because in some cases the best breeders possess characteristics distinct from those of the best show specimens, whilst in a very large number of breeds it is necessary to resort to double mating, which means the mating of separate pens to produce respectively the best cockerels and the best pullets. In a great many instances cockerel breeding strains and pullet breeding strains are kept distinct, whilst in others certain classes of birds of the same strain are selected for producing the best males and the best females. But it is impossible to explain fully the principle of double mating in the space at our command, and the amateur fancier would do well to study a book that deals with the question of exhibition breeding in a complete manner.

The fancier of experience bases his matings upon the result of the breeding operations in former seasons, for which purpose he keeps a strict pedigree of his stock, and can tell in a few minutes how each chicken is bred and what every old bird has produced. Such knowledge is, of course, the secret of successful mating, and amateurs who intend to breed winners must follow the example. If, for instance, one starts with a small pen of birds, purchased from and mated by a breeder, one should keep a pedigree of all that one breeds, by ringing the chickens, so that at the end of the season one can see which hen has produced the best specimens. The knowledge thus gained will be of great advantage when one comes to mate up next season, and it is because so many amateurs ignore the necessity of keeping pedigrees, and trust to chance matings, that failures so frequently occur. When things have to be left to chance, as sometimes happens even when pedigrees are kept, it is good policy to try several matings during the season, by changing the males or the females, which plan provides more opportunities of hitting upon the happy mating that produces show specimens.



EXTERIOR VIEW OF THE NEW POULTRY BUILDING AT CORNELL UNIVERSITY.

THE NEW POULTRY BUILDING AT CORNELL UNIVERSITY, U.S.A.

By PROF. JAMES E. RICE.

THE Poultry Husbandry Building, now in process of construction at Cornell, is the result of a special appropriation of £18,000 made by the New York State Legislature of 1909-10. This is by far the largest single appropriation ever made for educational purposes in Poultry Husbandry. It has set the pace and established a precedent which will enable other educational institutions to secure similar or larger appropriations in the near future. In thus showing its faith in poultry husbandry, by recognising it as a subject to be taught and investigated on the same plane as other departments in an agricultural college, New York State has placed herself in the front rank in the matter of developing her poultry interests.

The appropriation for the poultry building was made possible by a fortunate combination of factors. These factors were, first, the people of the State, from country and city alike, who, individually and through poultry associations, granges, and other organisations, and the Press, gave their hearty support. This was particularly true of the officers and members of the New York State Branch of the American Poultry Association. The secretary-treasurer and later the president of the organisation, Dr. E. M. Santee, introduced a resolution at the annual meeting held at Ithaca, Farmers' Week, 1909, recommending to the Director of the College, to the President and to the Board of Trustees that the Legislature be asked to make an appropriation of \$50,000 for a poultry building. The Poultry Department was requested to prepare plans for a building which would meet its needs. This was done, and it was found that it would cost approximately \$90,000, not including equipments and several auxiliary buildings. The authorities at Cor-

nell accepted the estimate and united in asking the Legislature for the sum required.

The new building was planned to meet the requirements of the four principal activities of the department; namely, (1) administration, (2) teaching, (3) investigation, and (4) extension.

This required provision to be made for handling large classes of two or three hundred students or more in lecture courses and proportionately large sections in laboratory work and in the practice (handicraft) courses; to handle the administrative affairs of managing a large producing plant and the storage and sale of products; to provide facilities for experiment and research work in the field, pen and laboratory, and to prepare for use, throughout the State, in extension activities, the most useful information available in concrete and teachable form.

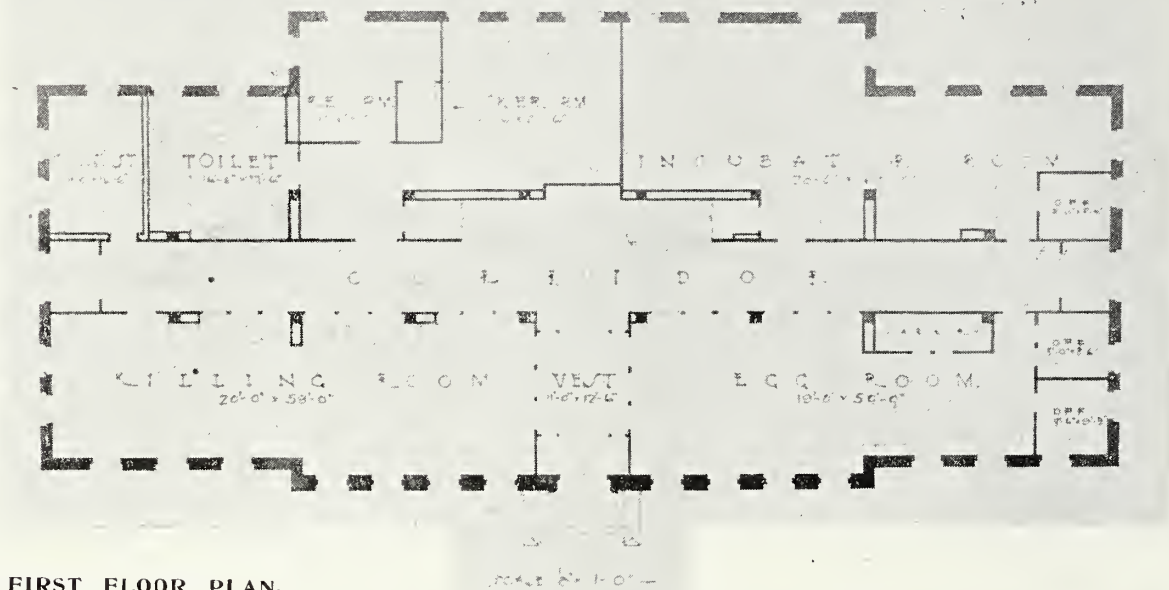
The structure is rectangular in shape, 132ft. long and 48ft. wide in the central portion, and 37ft. wide at the east and west ends. It contains a basement, three stories, and an attic. It is planned eventually that there will be loggias extending from each end of the main building, and leading to a judging pavilion to the westward and to an incubator building and brooder houses to the eastward. These buildings will be one and one-half stories high, without basements, and will extend north and south, the front end on the same line as the front of the main building.

The first story of the main building and the extensions will be approximately on the same level as the main Agricultural College group. This location required a large amount of excavation. The soil thus removed is being used in making a plateau to the north of the Poultry Husbandry Building and the proposed annexes. On this plateau will be erected the auxiliary buildings consisting of laying and fattening houses, feed house, brooder houses, breed observation house, detention ward, and infirmary. These buildings will be used exclusively for teaching purposes including student research and experiment.

The chickens will be reared, the breed testing project will be carried on, and the regular investigational work will be conducted on the fifty-acre poultry farm north of Forest Home, about three-quarters of a mile from the teaching plant.

The entrances to the building are all approximately

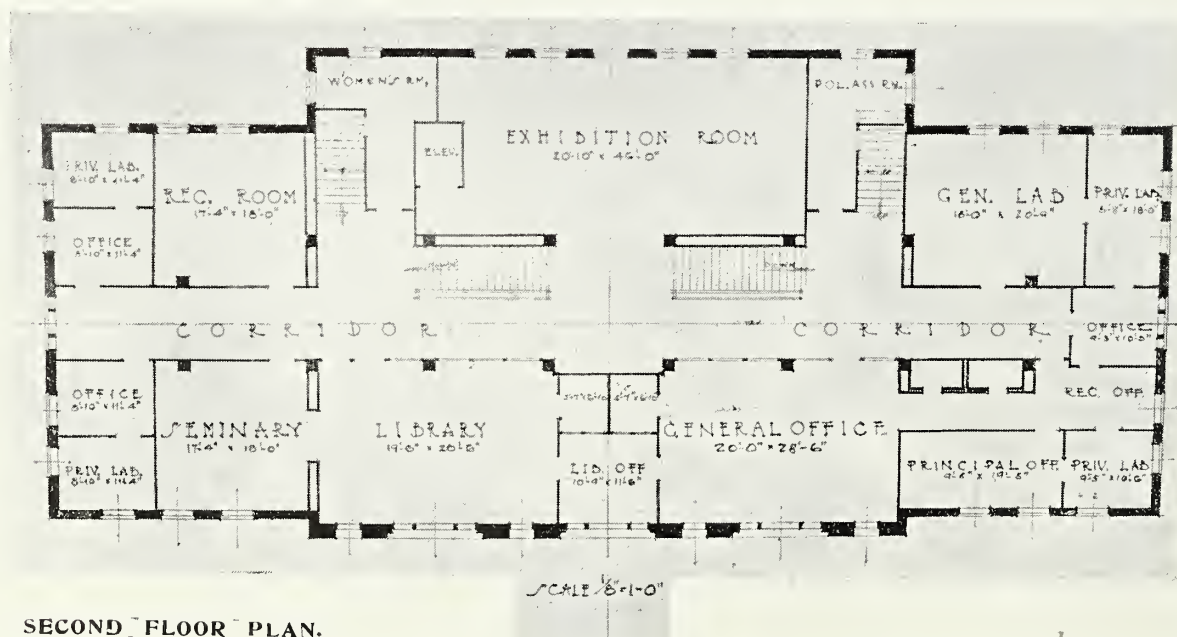
tion and to keep these from interfering with the administrative and investigative activities. Hence the first floor and basement are given over entirely to the practice courses, locker room, lavatories, receiving room, storage, carpenter's shop, laundry, killing room, egg handling and testing room,



FIRST FLOOR PLAN.

on the ground level. They are at each end and the front and back of the first floor. The main entrance is on the south side, in the centre of the building. A large vestibule opens into a main corridor which extends through the entire building, east and west. At

and to the commercial phases of administration. This arrangement makes it possible for the students to enter the building on the ground level and pass freely through the building in four directions, to and from the auxiliary buildings, lockers and lavatories



SECOND FLOOR PLAN.

the juncture of the corridor and the vestibule is a rotunda which provides a landing for the two stairways leading to the second floor.

The building was designed with the object in view of segregating, as much as possible, the practice work from the lecture and laboratory types of instruc-

tion without going up or down stairs and, therefore, without interfering with the activities on the upper floors.

The second floor is reached from the first floor by two stairways in the centre of the building. On this floor are a general office and five private offices, each of which, with one ex-

ception, is provided with a private laboratory. Here also is a general research laboratory, a library, an exhibition room, a seminary room and a small recitation room for special courses. On either side of the rotunda are a woman's rest room and headquarters for the Cornell University Poultry Association.

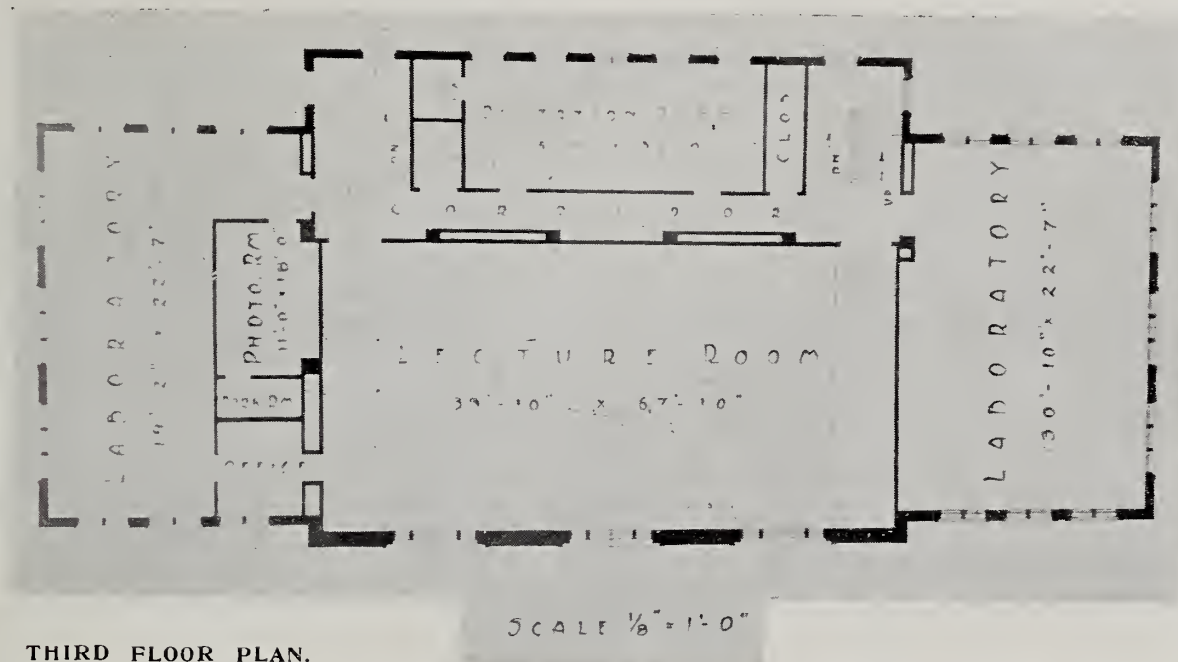
The third floor is reached from the main hallway in the centre of the building by two staircases. This floor contains a large lecture-room, having a seating capacity for nearly three hundred persons. Two large laboratories, a photographic room and a recreation room with movable seats occupies the remainder of the floor. The recreation room serves also as a meeting-place for the Poultry Association and the Winter Poultry Course Club.

An elevator shaft extends from the bottom to the

POULTRY CULTURE IN NEW ZEALAND.

By F. BROWN, Wellington, N.Z.

THERE is no industry of the soil where the same progress has been made of recent years as in poultry-keeping. Other industries have been specialised in with success for generations, even centuries, but only of late have invention and the labours of the specialist combined to render poultry-keeping capable of being conducted on a business footing, but a few years ago it was difficult to find a man in this country who was making a living solely out of poultry. To-day there are forty or more profitable poultry



THIRD FLOOR PLAN.

top of the building near the north side, opening in the basement in the receiving room and on each of the floors where stock and appliances can be removed most conveniently to the lecture rooms, the laboratories, and the exhibition room.

The main building, the extension and the auxiliary buildings, when completed as planned, will provide accommodations for teaching at one time one hundred or more winter course students and nearly three hundred regular and special students in the elementary lecture, laboratory and practice courses.

Duration of Fecundity.

M. J. L. Frateur, of the Louvain (Belgium) Breeding Institute, records experiments in respect to fertilisation of eggs. In the first series fifteen eggs laid by hens whose cock had died fifteen days before the eggs were laid. From these three chickens were hatched. Further tests showed that hens laid fertilised eggs fourteen and fifteen days after separation of the male bird. In the second series, unfertilised hens produced fertile eggs after the second to the fourth day after mating. Three lots laid fertile eggs on the second day, and two others on the third and fourth days respectively.

plants providing their owners with a comfortable living. The industry, however, is still in a transition stage; it has happily passed the problematical stage, and every practical poultryman can add something to the store of knowledge necessary to arrive at the best systems of conducting the industry. Therefore, the recital of the experiences of the successful poultrymen present will probably do more in the aggregate to furnish that information desired than the individual opinions of myself. Take the inventor. What the cream separator has done for the dairying industry, the incubator has done for poultry-keeping. It has enormously decreased the cost of production, and brought about, by reason of the concentration of effort, the desirous production at the most profitable period. With artificial incubation making possible the keeping of birds on a large scale, the teachings of scientific and practical men have been combined to make a system whereby this may be made effective. We know now how to incubate and brood chickens on a large commercial scale, and every day we are drawing nearer to the time when we will reduce the feeding and housing problem down to the most economical and effective point. The great problem to-day is not so much how to breed the high-type layer as how to breed a great laying flock of uniform heavy-pro-

ducing birds. The work must not be left to a few specialists, but the ordinary poultryman must learn how to cull, and use only birds which will show him a profit. Just as dairymen are discovering by means of herd-testing associations that very many cows in the herds have been robbing them of their profits instead of adding to them, so the poultryman must study this question so that every bird will be a money-maker, instead of only a percentage of the flock being profitable. Better appreciation of the cock bird with the laying pedigree—that is, being descended from birds with known laying records—will be necessary in the future. Having the stock the feeding of the birds and the general arrangement and management of the plant must be studied, so that while the revenue will be augmented the cost of production will be reduced to a minimum. The greatest success will only be achieved when utility characters are aimed at all the time, given the maintenance of a fair standard of the breed. The utility characters, however, should not be sacrificed for fancy points. It has to be remembered that many of the fancy points for which some breeds are prized at the present time were manufactured solely for the show pen, and it should concern us little if these have to go in the development of more valuable characters.

The whole object of the present-day poultryman is to produce eggs and table birds at a profit, and considering any system or procedure this fact should be always kept in view. It is not the gross but the net return which determines success or failure—not the eggs laid by a few of the best birds, but the yield of the whole flock and the securing of this yield at a minimum of cost. In the plan of operations the first essential is to have a well-arranged plant, laid out in such a manner that the birds can be attended to with a minimum of labour and expense. The houses should be constructed on such plans that the birds will be maintained in good health, and thus be in a condition to lay their maximum yield. The style of construction should be suited to local conditions, so that while the maximum amount of sun is let in, all draughts should be excluded. It should be so situated that the front will be out of the prevailing winds, and if this is not possible provision should be made to close in a portion of the front, so that the wind will not come directly on the birds. The old-fashioned closed-in, ill-ventilated, dark house belongs to the past. The perfect house, however, has not yet been invented. The most successful men are only in the experimental stage in this connection. Tree shelter on the property is a valuable adjunct. Of course, the quality of the stock on the plant is everything. However economically planned and however careful the management and effective the feeding, success cannot be achieved if the wrong class of birds are being kept. Again, it is no use having the desirable stock unless they are managed and fed to advantage. In all the advance made in the industry the most important development has been in raising the egg-yielding power of certain suitable birds. Strain rather than breed is, however, the chief factor, and the breed selected should be suited for the local conditions. Culling is imperative, for it is not the produce of a few that tells the tale, but the produce of the many. At last laying pedigree is becoming to be recognised, and now that breeders are able to

purchase stock with a laying pedigree, there is no excuse for the poultryman to work with unsatisfactory stock. I would emphasise that there is a laying type, and quite apart from secret systems, of which I am no advocate, there is a distinct form which indicates the layer, of which any who study bird life can easily recognise. In all other classes of stock there is a distinct type aimed at, though an exact knowledge of these types is not possessed by everybody. The feeding of poultry is a different problem. Good work is being done under various systems. I am a firm believer in allowing the high-type layer to balance its own ration. Some people are strenuously advocating dry mash feeding, and several poultrymen are securing good results by this principle, but they feed the meat separately, and are working with good laying stock.

Artificial incubation and brooding is now fairly well understood, and it is easily possible to obtain a clear idea of carrying out these operations. Incubation is carried out under two systems—the hot water and the hot air—though for special purposes the old hen is still the most successful incubating agency. Breeding is perhaps not so well understood as incubation. There is the Ideal heater and continuous pipe system, the Perfection oil stove with the pipe system, box brooders heated with lamps, and the fireless brooder. All these should be under cover. The first three named have been proved successful, but the last-named have only proved success under certain conditions.

I do not propose to enter into minute details on this occasion. I have merely outlined the main features of successful poultry-keeping. On such occasions as the present, when so many practical poultrymen are gathered together, more good will be done to the industry by an interchange of ideas and experiences, and these could be well brought out by a general discussion. Questions on the leading features of the business and the difficulties being encountered will well serve a basis for this, and I will, therefore, be glad to answer any questions put to me to the best of my ability.—Paper read at the New Zealand Poultry Conference.

SECOND ANNUAL NEW ZEALAND CONFERENCE.

FROM reports received the Second Annual Conference, held at Christchurch, New Zealand, November 7 to 9, 1911, was a great success, although the attendance was not quite so large as the previous year. Papers were read, and discussions ensued, on "Egg Circles," by Mr. T. H. Rutherford; "Co-operation," by Mr. J. M. Ferguson; "Fireless Brooders," by Mr. F. E. A. Gordon; "Export Trade," by Mr. S. Brittain-Bull; "Modern Methods of Poultry Culture," by Mr. F. Brown; "Chicken Raising," by Mr. J. Rose; "Preparation of Table Poultry," by Mr. F. Brown; "Lessons from Egg-Laying Competitions," by Mr. R. W. Hawke; and a demonstration of dressed poultry was given by Mr. R. Pounsford. Mr. H. P. Harvey, of Dunedin, is President of the New Zealand Poultry Association, and Mr. J. B. Merritt, Secretary.

AUTOMATIC RELEASE - DOOR FOR POULTRY - HOUSES.

By H. V. TORMOHLN.

POULTRY-BREEDERS who are believers in the old adage, "The early bird gets the worm," will undoubtedly be interested in the accompanying illustration of an automatic release door, to be used on poultry-houses where it is desired that the poultry shall be securely locked during the night and yet have the advantage of the first rays of the morning sun out on the range. The flock enjoying liberty first thing in the morning has the advantage of two or three of the best hours of the day to grow, and to find

raids upon their hen roosts by weasels, fox, or other night prowlers, when the house was left open for the fowls to get out bright and early, will especially welcome these plans.

An explanation of the plans is hardly necessary, as the sketch fully gives the details of construction. The movement of the trap is very simple and easy, and is released by the first bird which walks on to the slightly raised false floor. A string is fastened to this floor, passing up over the projecting T-shape attachment, and down to the wire hook. To this cord is attached a weight, heavy enough to balance the false floor when raised and set for action, as shown in the lower plan.

The trap is attached to the outside of the building, and can be of any size desired, according to the breed. The dimensions given are suitable for any of the medium-sized fowls, but for large birds, such as Brahmas, Cochins, or Langshans, the opening into the house will have to be enlarged accordingly.

The front trapdoor is covered with inch-mesh wire netting, or the finer $\frac{1}{2}$ in. if it is desired to be sure of the weasels. This door must be covered with wire, so that the fowls may be attracted by the light and induced to come out upon the false floor and release themselves. When the wire door is up the hook is pulled down over the edge, and should be tight enough to hold on by its own weight, as all resistance is relieved by the counter-balance or weight which is fastened just above the hook. The weight, of course, should be quite heavy enough to balance the false floor, so that it will stand in any position to which it may be raised.

About four inches is sufficient incline to set the false floor. The end of the false floor towards the building should be fastened to the floor with a hinge.

The weight of the first hen will release the trapdoor the instant she walks out upon the inclined board, permitting all the flock to pass out.

THE AUSTRALIAN LAYING COMPETITION.

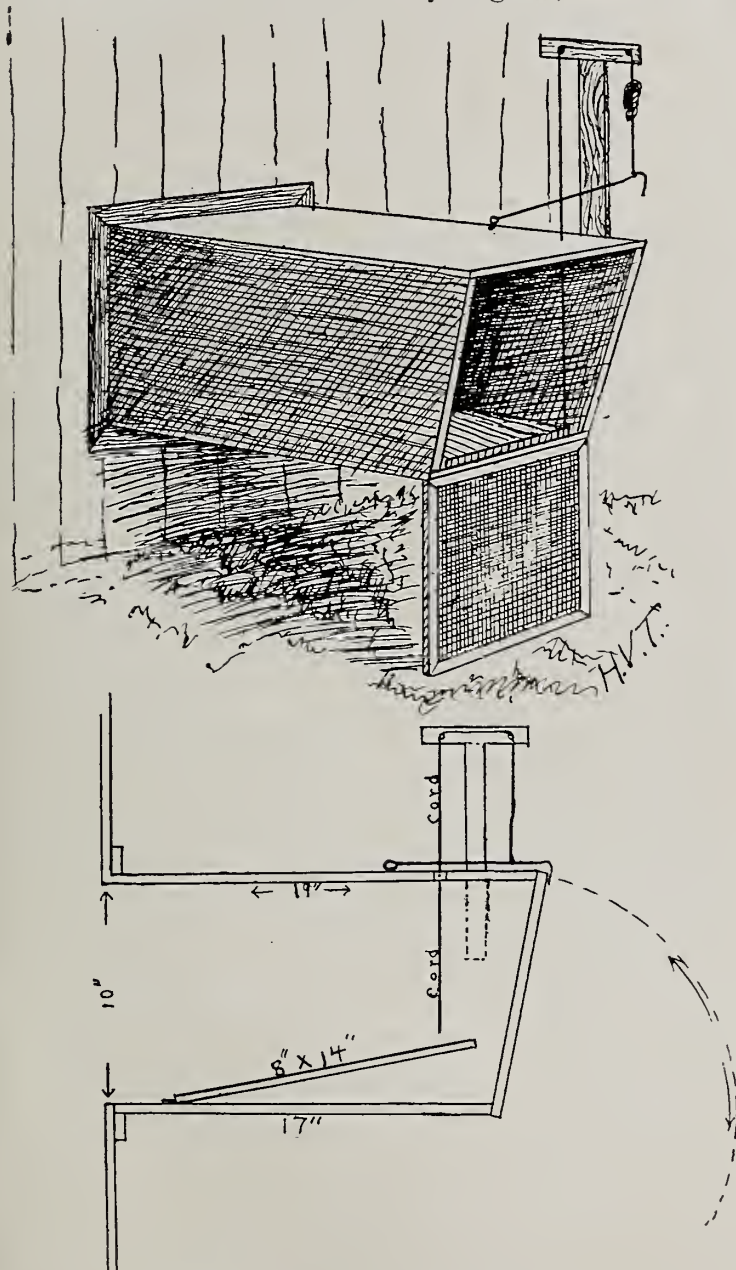
To the Editor of the ILLUSTRATED POULTRY RECORD.

DEAR SIR,—Under separate cover, I am forwarding you some entry forms, copies of regulations, &c., in connection with the 1912-13 Egg Laying Competition at the Government Poultry Station, Roseworthy. I trust you can spare space to refer to this, and if so, I should like to add a cordial invitation to breeders to send pens. If they will fill in the entry form and send P.O. order for 10s. that will suffice. If they can ship the birds at once so much the better, and if there is not a boat direct to Adelaide at the time, they can be sent to Melbourne and sent across by rail. I will fix up all details if the owners advise me at once. I should very much like to have some English entries. I am practically certain that if good Wyandottes, Minorcas, or laying-strain Leghorns were sent out that they would sell here as long as the price was reasonable.—Yours faithfully,

D. F. LAURIE,

Department of Agriculture, Victoria Square, Adelaide.

[Mr. Laurie has forwarded us some entry forms, and we shall be happy to send these to any of our readers who may apply for them.—ED., I.P.R.]



THE AUTOMATIC RELEASE-DOOR.

[Copyright.]

the early worms, which they would not otherwise have should they have to sit and fret, waiting for their keeper to release the trapdoor to let them out to freedom and the fresh morning air.

Those who have had the sad experience of night

FANCIERS AND FANCY MATTERS.

By WILLIAM W. BROOMHEAD.

White Rocks—We Worms!—Changes in Wyandotte Circles—Retirement of Mr. G. T. Drake—Club News—Shows.

WHITE ROCKS.

A correspondent has drawn my attention to an error that appeared in my notes in last month's issue, and I hasten to correct it. Concerning the recently-formed White Rock Club, I am made to say: "The Club hopes to hold its first show at a provincial fixture in the Midlands during next month." As a matter of fact the show—and quite a successful exhibition, too—took place at Stirchley, Birmingham, on December 13, in conjunction with the open event of the Stirchley, Selly Park, and District Fanciers' Society. My note was written for the November number of the ILLUSTRATED POULTRY RECORD, but, unfortunately, it had to be held over at the last moment.

WE WORMS!

To earth! Those English fanciers who for these many years past have been congratulating themselves—fairly boasting about it, as it were—on their being absolutely top-dog at breeding fancy fowls should take heed. Lately there has been among us a gentleman from "across the herring pond," and he has told the tale pretty plainly that in points that matter the English poultry fancier is a very long way behind the American in certain varieties. So, at least, it appears from one of "us," who lately had a chat with a famous American fancier-artist. Our White Wyandottes, our Barred Plymouth Rocks, and our Leghorns, all, apparently, are faulty, and in these, we are told, the Yankee can beat us hollow. On the other hand, there are some spoonfuls of sop served up for the Englishman. The colour and lacing of the Silver and Gold Wyandottes exhibited in this country, for instance, "are ahead of ours, but"—and it kind of takes the gilt off the gingerbread, so to speak—"they are not Wyandottes in type," while the yellow legs of the Blacks and the bright colour of the Partridges shown over here please him. The Black Leghorn, too, took his eye, on account of its yellow legs, and the Orpington! "Yes, you've got the Orpington," was what he is reported to have said. Well, after all, this kind of criticism does not do any harm, and it may do good, but it is just as likely that it will have as much effect in certain quarters as water on a duck's back. However, if American breeders have their birds so far in advance of those exhibited over here, it does seem a pity that some of them do not bring a team or two across to one of the big English shows. For, as the schoolboy is apt to declare on hearing that a chum has something better than he possesses, "Seeing's believing." Englishmen have oftentimes taken or sent strong teams of fowls to America for competition at the Madison Square Gardens Show in New York. There is plenty of time for Americans to get a strong lot forward for this year's International.

CHANGES IN WYANDOTTE CIRCLES.

The retirement from Wyandotte circles of Mr. O. F. Bates and Mr. C. N. Goode should give certain varieties of that popular breed a fillip. For years both of these gentlemen were particularly strong in Golds,

Silvers, and Whites. In fact, to such an extent were Mr. Bates's birds successful that at the most important events of the season entries in the classes for Golds and Silvers had been reduced almost to the minimum. Mr. Goode, too, was generally on top with his Whites. But now that these winning yards have been disbanded, competition in the varieties should come up well next season. It is as well to remark that Mr. W. Smith Lambert, who for several years acted as poultry-manager to Mr. O. F. Bates, is now settled on a farm at Silsden, and will exhibit poultry in his own name. After the late Birmingham Show he took over—with the exception of the White Orpingtons, which were purchased by Miss Carey—the entire stock and plant at Harlow Court Farm, so there is every reason to believe that he will be "a hard nut to crack" this year.

RETIREMENT OF MR. G. T. DRAKE.

Readers of the RECORD will be surprised to hear that Mr. G. Tyrwhitt-Drake has relinquished the Fancy entirely, having disposed of the whole of his stock by auction last month at Cob Tree Manor, Maidstone. There were two reasons that led Mr. Drake to take this course, one being that his poultry-man, who has been in charge of the Cob Tree stud of Leghorns for eight years, is going abroad, while the other is that Mr. Drake's collection of wild animals, owing to its large increase, now takes up so much of his time that he could not devote the attention to his birds that was necessary. However, although Mr. Drake has given up his poultry, he hopes still to keep in touch with the Fancy, and, I may add, he is not thinking of resigning his position as hon. secretary and treasurer of the Poultry Club.

CLUB NEWS.

One has to wait until the end of the year, or at least until the Palace Show is well over, to hear much about some of the specialist clubs, since, often enough, interest in them wanes when exhibitions are not going strong. The usual "crop" of club shows was held towards the close of last season, and although the International had its share of them, many were spread over the country. There is no room here to deal with each separately; but, on the whole, they appear to have been successful. The last of them, I believe, was the Buff Leghorn Club Show, at Guildford, on January 16—somewhat late in the season, certainly. The annual meetings, too, took place round about Palace time, and few secretaries reported other than satisfactory progress having been made. However, one may expect the Year Books any time now; so more of them anon. By the way, those readers interested in Malines—a breed that has evidently "come to stay"—should notice that the Ladies' Malines Club has now changed its name to "The New Malines Club (with which is incorporated the Ladies' Malines Club)," and that men are admitted as members. One of the latest specialist clubs to come into vogue last year was the White Turkey Club, and at its meeting at Birmingham a standard of excellence was drawn up and approved of, so there is a good prospect of the White coming into its own this year. There was some talk of a club show being held last month; but up to the time of going to press with these notes I had heard nothing of it.

Shows.

With the Scottish New Year's shows over, the 1911-12 show season may be said to have closed. There are two or three small events still to be held in England, and an important Game show in Wales, which will carry the season on for a month or so; but to all intents and purposes it is over, and fanciers are turning their attention to the hatching of next season's winners. Some of them, as usual, have taken time by the forelock, and will be almost by now going through their chickens for the first weeding! It was quite noticeable at the early shows last year that many of the birds entered in classes for fowls hatched in 1911 had made remarkable growth; and it was not surprising to read in a contemporary journal that visitors to these shows fairly gasped at the growth of some of those chickens! Still, there you are, there is no knowing what one can do until one tries! The specialist club shows that took place during last month were the Scottish Hamburg, at Paisley, and the Scottish Minorca and Scotch Grey, at Kilmarnock, on the 1st; the Variety Wyandotte, at Swadlincote, on the 3rd; the Silver-Pencilled Wyandotte, at Gloucester, on the 11th; and the Buff Leghorn, at Guildford, on the 16th. The Welsh International is being held at Treorchy, Glam., to-day (February 1), and a show of Old English Game and Old English Game Bantams at Carlisle, while among other exhibitions for the present month are Nantwich, Cheshire, 2nd and 3rd; Irvine, N.B., 3rd; Ripley, Derbyshire, 17th; and Darley Dale, Derby, 22nd. The great Welsh United Game Club Show is fixed for March 6, at Pontypridd, and the spring show, at Aberdeen, comes off early in that month. We must look out for Ayr towards the end of April, and Otley and Darwen—both important events and with classes for 1912 chickens—early in May.

BANTAMS FOR AMATEURS.

IT is a mistaken idea to imagine that Bantams require a large place in which to live, for, providing they are kept scrupulously clean and are carefully fed, they will do remarkably well in very small pens, and if the amateur has a small plot of grass at disposal movable pens about 3 ft. long (divided into a run and small house) will be large enough for a pair of clean-legged Bantams or a couple of pullets. Feathered-legged birds will require rather more room, but in any case wooden floors should always be provided to the house part in which the birds sleep; the pens can be moved each day, and in this case the ground will remain fresh for several seasons and the grass be much improved thereby.

Of course, it is not absolutely necessary that Bantams should be provided with a grass run, as a small lean-to house, say 3 ft. square, with a covered run twice as long and the same width, should very well accommodate a cock and three hens.

The chickens from the majority of our different breeds of Bantams are, with proper care and attention, hardy little mites, and when kept dry and properly looked after, will thrive in almost any small garden.

In my opinion it is much more satisfactory to buy a pen of birds than a sitting of eggs, for you do

see what you are paying for with live birds, but with eggs one is often disappointed with the result.

This will apply equally whether the amateur intends keeping his pets simply at home or exhibiting his birds at shows, and I may say, by the way, that I believe the amateur who takes up Bantams for exhibiting will find it a most fascinating and instructive pastime. The mere fact of training and preparing one's birds for exhibition should prove a matter of keen enjoyment, to say nothing of seeing your birds in the show pen with a first, second, or third prize card stuck through the wires.

For my own part I must say that, although I admire each and all of the many beautiful varieties of Bantams, none in my opinion comes up to the stylish Rosecomb, and whether it is the black or white variety, few Bantams, I think, are so attractive either in the show pen or in their runs at home.

In my case many of my Rosecombs are kept in small movable covered-in pens, about 3 ft. long by 2 ft. wide, and 2 ft. 6 in. high in front sloping down to 1 ft. 8 in. at the back, each pen consisting of a house 1 ft. wide, with a run 2 ft. wide. The whole of the front of the sleeping house consists of the door, in which a small window is inserted, and the run is boarded up six inches high, the remainder of the front being wire netting covered with unbleached calico. The house part has a boarded floor kept covered with fine peat moss or sawdust, and the birds pass into the covered run through a hole in the partition.

My cockerels are placed in these pens as soon as ever they are fit to leave the hen, either in pairs or singly, and I find they do not fight as they would if left in a flock, and by keeping the cockerels in these small pens they are much tamer than if housed in large pens or at liberty, besides which they are much more easily handled and trained for the show pen.

The breeding pens consist of lean-to covered-in structures boarded eighteen inches high in front and the remainder covered with wire netting, in each of which is a sleeping house, the floor of the pen being covered several inches deep with dry leaves, earth, peat moss, or chaff. Some of my pens are connected with a grass run, to which the birds have access on fine days, and the other pens have food supplied them each day. In the pens the hard food is scattered among the leaves, &c., to give the birds exercise.

The feeding of poultry is at the present time quite a vexed question, and of course this applies equally to Bantams—some fanciers advocating the dry feed system, other preferring a proportion of soft food; and, while it is true that the hard-feathered varieties of Bantams do not require a large amount of soft food, it is equally true that soft food must be given to the soft-feathered varieties to produce the extra amount of feather required.

For my own part I find that when Bantam chickens are hatched by a hen the chickens are best left undisturbed for at least twenty-four hours, excepting to remove the broken shells from the nest. Let the first feed then consist of hard-boiled eggs chopped fine (shells as well), mixed with coarse oatmeal, and given every two hours, and continued for the first two or three days; for the next few days, as a soft food,

boiled rice may be given, and to cook this properly the rice should be put into a basin of milk, or milk and water, the basin being placed in a saucepan of water and the rice steamed until the grains have swollen to their fullest extent without adhering to one another; the grains should then be rubbed in oatmeal until dry. The feeding may now also be varied with bread soaked in milk and squeezed as dry as possible, and for a change liverine or biscuit meal may be used. For dry food a mixture of canary seed, millet, broken peas, rice, and wheat is the best, and this should be given alternately with the soft food. Particular care should be taken that the soft food should never be sloppy, and that all food should be placed in troughs or on pieces of board, only sufficient food being given for each meal.

Adult Bantams may be fed on any of the foods I have mentioned, but the great secret in keeping them in health is to ring the changes as much as possible in feeding and to keep them clean and dry, not forgetting a plentiful supply of grit and green food.

W. H.

A BACK-YARD POULTRY HOUSE AND RUN.

By A. C. HORTH.

THE poultry-keeper of small means, who has only a back-garden for his fowls, does not, as a rule, want an expensive house, or one containing any difficult construction. In order to assist the backyarder I have prepared a design which will, no doubt, answer the purposes of a large number of small poultry-keepers who would like to build their own run on up-to-date methods, and who have not the necessary skill in woodworking tools to make elaborate joints.

The house and run shown in front and end elevations at Figs. 1 and 2, and in plan at Fig. 3, is designed to utilise all the ground space for the run, and has provision for the roosting-house on an upper floor. Both ends may be easily opened out for cleaning; the front of the roosting-house also opens out full width and height, and the nest-boxes are easily removable. The framing is easily made, the only joints being the simple lapped halving. The cost, with weather boarded roof, will be about 54s. 6d., or with corrugated iron roofing, as shown in the illustration, the cost should not be more than 65s. 9d. Both totals include cost of asphalt floor, 5s.

To make the construction quite clear, a perspective sketch of the frame work is given at Fig. 4. First make the two end frames, as shown at Fig. 5, from 2in. by 2in. stuff, halving the corner and top pieces to form a good joint, as shown in detail at Fig. 6. Next take two 14ft. lengths of 5in. by $\frac{3}{4}$ in. matching, and two similar lengths of 2in. by $1\frac{1}{4}$ in. batten, and nail the former in front, as shown at "a," and the two latter attach to the back, with the half-lapped joint as shown at "b" and "c," and at Fig. 7. The four outside rafters, shown at "d," should be laid on the ground and marked off to the correct slope, a rise of 12in., and then the ends fitted in 1in. by $\frac{1}{2}$ in. slots cut in the 5ft. 6in. by 7in. by $1\frac{1}{2}$ in. ridge board, as shown at Fig. 8, the other ends being nailed to the outside of the end frames.

The front frame is composed of two uprights, "e" and "f," each 5ft. 6in. by 2in. by 2in., with three rails, "g," "h," "i," of the same material halved in at the heights shown. This frame is now placed in position, and nailed to bottom boards and rafters. Similar uprights, "k" and "l," halved, as shown at Fig. 9, to the long rails should be fitted at the back. Halfway between the ridgeboard and the end frame fit in a length of 6in. by 1in. stuff, as shown at "m" and "n." This practically completes the framing.

THE BACK should be boarded with 5in. by $\frac{3}{4}$ in. matching, nailed against long rails and to rafters; top cut off flush with slope of latter.

THE ENDS are fitted with two doors, made of 2in. by $1\frac{1}{4}$ in. stuff, framed up, as shown at Fig. 10, and boarded up about 18in. with 5in. by $\frac{3}{4}$ in. matching; upper part covered in with wire. Doors hinged with 2in. butts, and provided with bolts and handles, &c.

THE ROOSTING-HOUSE.—Boarded each side with 5in. by $\frac{3}{4}$ in. matching, boards placed horizontally and nailed to inside of frame within $\frac{3}{4}$ in. of front. Floor of 6in. by 1in. boards, nailed to front and back rails, front end of boards being $\frac{3}{4}$ in. from outside edge. Opening made for fowls on right-hand side, about centre; board provided and hinged to floor to form ladder. Two doors provided for front as shown, 5in. by $\frac{3}{4}$ in. matching being cut as indicated, nailed to 5ft. 5in. lengths of 2in. by $1\frac{1}{4}$ in. batten, and placed $\frac{3}{4}$ in. away from lower edge for top door, and $\frac{3}{4}$ in. away from upper edge for bottom door, other edges being flush. Both doors hinged with cross garnet hinges as shown, and top-door provided with chain and hook. Wooden buttons fitted each end to close flaps when necessary.

FRONT.—Wire netting fixed on from inside all over open front, in between rails "h" and "i" (front of roosting-house), and at the top covering the space indicated at "i."

ROOFING.—7in. weather-boards, with capping nailed on to rafters or six 8ft. sheets of corrugated iron screwed on instead.

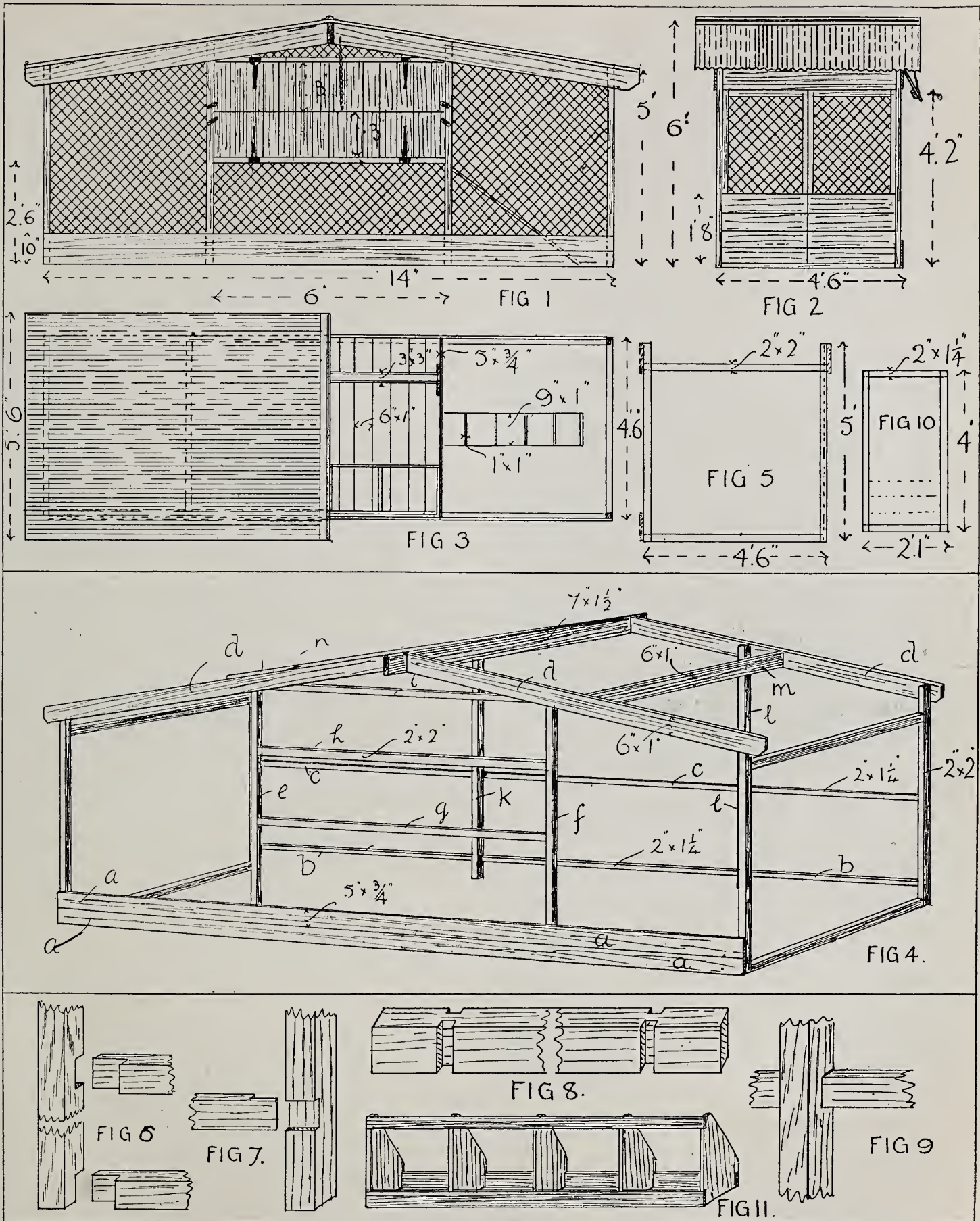
NEST-BOXES.—Made up as shown at Fig. 11, with three 5in. 6in. lengths of batten, with upright sides of $\frac{3}{4}$ in. matching.

PERCH.—Made of 3in. by 3in. stuff and fitted into sockets nailed to sides of house.

Inside treated with limewash; outside painted with oil colour or tarred.

MATERIALS REQUIRED.

	s.	d.	£	s.	d.
78ft. 2in. by 2in. batten ...	3	6			
120ft. 2in. by $1\frac{1}{4}$ in. batten ...	5	0			
6ft. 3in. by 3in. batten ...	1	0			
100ft. 6in. by 1in. board ...	6	6			
150ft. 5in. by $\frac{3}{4}$ in. matching ...	15	0			
4ft. 9in. by 1in. board ...	1	0			
6ft. 7in. by $1\frac{1}{2}$ in. board ...	1	2			
Netting ...	3	6			
Hinges, nails, bolts, &c. ...	2	4			
Lime and paint ...	3	3			
Rubble, ashes and tar ...	5	0			
			£2	7	3
With 175ft. weatherboards, 7in. at 7s. 3d. ...			£2	14	6
With six 8ft. sheets corr. iron at 18s. 6d. ...			£3	5	9



THE BACK-YARD POULTRY HOUSE AND RUN.

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THE CHOOSING OF A BREED.

THIS is a matter of the utmost importance in successful poultry-keeping, just as it is in the breeding of any other farm stock, and an important factor in the failures which have from time to time occurred has been the selection of breeds not suited for the purposes which the poultry-keepers had in view. This is nothing more than a plain and absolutely reasonable proposition, the common sense of which ought to be perfectly apparent to all; yet how often do we find it ignored, with the most disastrous results? We have now a large number of breeds capable of satisfying the requirements of every possible class of poultry-keeper, and to the long list of useful and popular, as well as beautiful, breeds new names are continually being added. There is no dearth of variety, and even the most fastidious



A MODERN BLACK RED GAME COCKEREL.

amongst us can satisfy his taste when selecting a breed for either a practical or an ornamental purpose, or for both objects combined. The necessity for breeding with definite objects in view has indeed been a recognised principle amongst poultry-keepers, as amongst breeders of other kinds of stock, for a considerable number of years, and in the older works on poultry- and stock-breeding the leading chapters very

often were devoted to the consideration of this most important subject. The selection of a breed is indeed one of the first questions which the prospective poultry-keeper must decide, because the preparation of premises, the erection of houses, the laying out of yards, &c., must depend to a very great extent upon the breeds which are to be kept and the purposes for which they are kept.

This principle of successful poultry-keeping seems to have been fully recognised by the United States Government when ten years ago it issued a bulletin to farmers through the Department of Agriculture, giving advice of a most practical nature, and of a kind which holds good, with but slight qualification, even up to the present day. Here is a brief quotation from the Government bulletin, containing sound advice in a most intelligible form: "A mistake is oftentimes made in selecting fowls of a breed that is not suited for the purpose for which they are to be kept. If egg-production is the all-important point it is a most serious mistake to select a breed of fowls that is not noted for this product. If, on the other hand, meat is the chief object, an expensive mistake will be made if any but the heavy-bodied fowls are chosen. The small, active, nervous, egg-producing breeds cannot compete with the larger phlegmatic Asiatics for meat-production. Then, too, if fowls are kept for both meat and eggs some breed of the middle classes should be chosen. These, while they may not attain the great size of the Asiatics, are sufficiently large to be reared profitably to supply the table with meat and at the same time have the tendency for egg-production developed sufficiently to produce a goodly number of eggs during the year. The Wyandottes and Plymouth Rocks are good illustrations of this class of fowls. While individuals of these breeds have made excellent records in egg-production the records of large numbers do not compare favourably with the egg-production of the Mediterranean fowls." This advice still holds good in the main principle involved, but may need some qualification, owing to the extraordinary progress which has been made within the past decade in the building up of great laying strains of the American breeds. As egg-producers they have, in fact, been raised to practically the same plane as the Mediterranean fowls.

South African Poultry Conference.

It is announced that the next Poultry Conference is to be held at Durban, Natal, commencing February 21. This will be the first time it has assembled at Durban.

Belgian Breeding Stations.

Proposals are being put forward for the establishment of poultry-breeding stations in Belgium, of which a few have been founded. M. Xavier von Wersch, in *Chasse et Pêche*, submits regulations for general adoption.

Poultry in Newfoundland.

From a speech at St. Johns, Newfoundland, the Right Hon. Sir Edward Morris, Premier of the Colony, urged that greater attention should be paid to poultry, in which he stated that the industry was valued at 500,000 dollars, or 200,000 dollars more than the lobster industry, and nearly as much as the seal fishery.

THE EGG-SCARCITY: AND HOW IT IS CAUSED.

By NORA TYNAN O'MAHONY.

I DO not think that I am very far wrong in saying that never have eggs been so scarce and so dear as they have been during the present winter and late autumn. Indeed, the scarcity began in the early days of the finest summer we have ever known, which fine, warm, dry summer, by the way, may have had not a little to do with the scarcity of eggs, as well as of flowers. As most people know, hens to be good layers require certain stimulating food-stuffs of which meat in some form or other is a most important item. Now, the ordinary cottage vanithee, to whom meat is an article of luxury seldom to be enjoyed even by herself or her husband and children, would never dream of giving such an expensive article of food to her fowls, even if she could better afford it.

THE BEST LAYER.

Nor do the free-running, healthy hens who forage for themselves so energetically about the old-fashioned cottage or farmhouse feel any great need of it, since they readily find all the stimulant they want in the abundant supply of snails and worms and insects everywhere abounding, to say nothing of the scattered and wasted corn of the haggard and stubble-field. It is the free-running hen of this class, kept healthy by constant exercise in search of food for herself and a possible brood of chicks, and not rendered overfat and flabby by confinement within a run, that will prove in every case the best layer.

SHORTAGE OF PROVENDER.

The long drought of the past summer occasioned a scarcity of supplies in more things than reservoirs. Insects were plentiful enough, but of snails, slugs, and such-like succulent provender of fowl and bird-life there was a truly lamentable shortage, from the hen's point of view. Nor did even the hardiest and most daring of worms ever seriously essay such a thoroughly hopeless task as burrowing his way towards the light through a soil sun-baked day after day, week after week, month after month, to the consistency of brick. The hens, therefore, were bereft of one of the most acceptable and integral parts of their food supply, and as a consequence our breakfast-tables lacked eggs, which even in the summer itself had reached almost famine prices.

But there is another, and even a more potent, factor to account for the year-round shortage of eggs. This factor, strange to say, lies in nothing less than the planning and disposal of the new labourers' cottages, which add so much to the prosperous and neat appearance of most rural districts, and which should have contributed also, one would have thought, to the material wealth and prosperity of the owners. As regards the egg and poultry industries, at least, their influence promises to be little short of disastrous, and this for reasons not too far to seek.

ON THE WRONG PLAN.

In a former paper on labourers' cottages I expressed the opinion that it was somewhat of a mistake not to have built them singly instead of in

groups. They are usually in groups of two or four or six, and very often number sixteen or twenty or twenty-four, with the result that the occupants experience most of the disabilities of town or village life, with little country advantages save those of sunshine and fresh air. The keeping of fowls, or of goats, or of pigs, if attempted at all, is usually abandoned after a short trial, owing to the vigorous and often vituperative protests of one's neighbours, to whom one's fowls, above all, prove a never-ending and fretful source of quarrel and complaint. The owner of a newly-acquired cottage is usually pleasantly and pardonably proud of his garden and its flowers; the prize scheme adopted by the County Councils for the best kept cottages and gardens usually give rise, also, to a wholesome feeling of competition and emulation—and one doesn't need to be told that a few healthy, briskly industrious hens are about the worst earthly enemy any gardener need fear.

DESTRUCTIVE INVADERS.

The gardens of labourers' cottages, be they in groups of six or sixteen or twenty-six, are invariably divided only by a thin and easily passable barrier of wire or iron railing, over which (should she not be able to pass through) Mrs. Hen has not the slightest difficulty in flying, with disastrous results to the flowers and seedlings, and equally troublesome effects on the nerves and temper of the next-door neighbour. If hens are kept at all, therefore, they must be kept within the narrow restraint of a wire-run, for all the world as if they occupied a space in the narrow backyard of a city tenement, instead of in the life-giving freedom of a wide, open country.

HENS ON STRIKE.

Little wonder is it, then, if Mrs. Hen should go on strike and absolutely refuse to lay. Deprived of her exercise, of the wholesome, natural, stimulating food which she herself knows best how to obtain, she grows flabby, unhealthy, pale of head, and debilitated. What use to keep hens under such circumstances at all, the cottage wife asks herself with good reason. For with the present high prices of cereal food and every kind of fowl provender, it is at a dead loss that hens are kept at all where they cannot be allowed to secure most of their feeding for themselves. In the home of the cottager there is little or none of the waste which might otherwise prove an excuse for the keeping of a few poultry. Even the crusts are gladly devoured by the hungry children, and the Irish cottage homes where it used to be a saying that it was "a sin to count potatoes," strict economy, even as regards this "blessed fruit that grows at the root," has come to be in these hard times a matter of necessity, not choice. Therefore, Mrs. Hen and her brood must go.

A SCARCITY OF FOWLS.

Seeking a few newly-laid eggs for a sick friend in the middle of the last month of 1911, I was struck during my walk of a mile or more, not so much by the entire absence of eggs as by the extraordinary scarcity of fowls. Applying at one of a group of four labourers' cottages, I was told that none of the people in any of them now kept hens, and that my only chance of getting eggs would be at the gate-lodge of a farmer's place a mile further on.

New-laid eggs this winter, when to be had at all,

ranged in price from 2s. to 2s. 6d. per dozen, and they were at almost equal famine prices all during the last half of the year. A poor semi-invalid cottage woman, who looked as if a little good nourishment was badly needed by her, told me that she'd think very badly of eating an egg as long as she could get 2d. or 2½d. for it. It seems a thousand pities on the face of it that the labourers' cottages, which were intended as an aid to the comfort and prosperity of our poor neighbours, should prove in this matter at least a stumbling-block in their way, and the crushing out in very great measure of one of our most important home industries.—*The Irish Independent*.

HIGH INDIVIDUAL LAYING RECORDS.

SOME remarkable egg records have been secured at the Oregon Experiment Station. Among them is the record of a Plymouth Rock hen that in twelve months, ending November 12, laid 259 eggs. She was still laying heavily when the year closed. In the month of October, in the moulting season, she laid twenty-seven eggs, indicating that she finished the race in excellent condition. Another remarkable record was made by a cross-bred hen. This hen laid 257 eggs during the twelve months ending November 17—just two less than the other—and was still laying well and was in good condition. A Leghorn hen also showed remarkable laying powers, but fell short of the first two by several eggs.

So far as published official records show, it is believed that the two records of 259 and 257 eggs have never been equalled. A few years ago the Maine Experiment Station published a record of 251 eggs for one hen during her laying year, and that performance has never before or since been approached until now.

"I don't pretend to say that we have the best laying hen in the country," said Professor James Dryden, discussing the results of the experiment. "There are doubtless many others just as good. There are some, probably, laying just as well—maybe better—but the owners do not know it. There are others that do not lay as well, though they may have the capacity and with proper feeding and care would lay as many; but our experiments show that no amount of good feeding and good care will make some hens lay. In the same pen with the 259 egg-hen, was another that laid only 6, with the same feeding and care. But, on the other hand, the ability to lay may be present, and there will still be few eggs laid if the hen is not supplied with good food."

Probably the most interesting part of this year's results is the record of a daughter of a hen that laid 218 eggs. The daughter is now well over the 200 egg-mark, and bids fair to equal the record of the dam before her laying year closes.

The experiment station will issue a bulletin in the near future, in which statistical matter of value regarding the feed and care of the flock and the individual performance of each of the hens under test will be given.

REPORT ON THE POULTRY INDUSTRY IN GERMANY.*

THIS, the latest addition to the extremely useful series of reports in which the poultry industry in America, Denmark and Sweden, and Belgium has already been dealt with, is in no whit less interesting than the earlier volumes as regards facts and details of production in other lands; but a more particular importance attaches to Mr. Brown's deductions and significant suggestions relative to the probable influence upon our own industry of the trend of events in the German Empire. In his opening sentence reference is made to the small amount of attention that has hitherto been paid to Germany in this connection, by reason of the backwardness of production in that country and the consequent inability of her poultry-breeders to teach us much. By the subsequent array of facts and the elaboration of his arguments Mr. Brown shows that this backwardness and the resultant inability to cope quickly with altered conditions of demand materially intensifies the seriousness of the outlook in the near future with regard to the apparently unavoidable effect upon imports into the United Kingdom. We know, from our own experience, that where agriculturists are concerned, time is required to effect changes, and that economic readjustment involves the overcoming of many difficulties, so that—making due allowance for the strenuous efforts of the Imperial and State authorities to promote the industry—it is readily understandable that an increasing German consumption will tend to deflect the stream of our foreign supplies, with the probability of lasting results, long before the native producers can in any adequate measure approximate to the demand—if ever they do. The importance of the conclusions arrived at, and set forth at length in this report, relative to this aspect of the inquiry and its results, can scarcely be over-estimated inasmuch as they concern producers, traders, consumers—in short, all who are in any way connected with or interested in questions affecting food supply. The lesson for those engaged in industrial poultry and egg-production in the United Kingdom is so obvious as to need no insistence in this place, but it may be hoped that it will be learnt in time by those public authorities whose duty it is to promote and develop a branch of agricultural occupation possessed of such patent possibilities.

The wide scope of the report is sufficiently indicated by the main sections, which deal with: Modern Developments Within the German Empire; Germany's Influence on British Supplies; Methods of Poultry-Keeping; General Production; Goose Breeding and Consumption; Races of Poultry in Germany; Marketing the Produce; How the Industry is Advanced; Exhibitions—Utility and Otherwise; Summary and Conclusions. It is perhaps inadvisable to make selections where the matter is of almost equal interest throughout, but special attention should be devoted by the reader to the section dealing with the efforts of the authorities to advance the German industry, and the conclusions should be made the subject of careful examination.

*REPORT ON THE POULTRY INDUSTRY IN GERMANY. By Edward Brown, F.L.S., Hon. Secretary National Poultry Organisation Society. Pp. 124, illustrated. 1s. net, or 1s. 2d. post free from this office.



A WHITE ORPINGTON COCKEREL

FEBRUARY NOTES FOR AMATEURS.

LAST month we discussed the arrangements for making the early chickens comfortable, which discussion was intended for the benefit of those who hatch in the wintry month of January. We have to remember, however, that there are a great many more who never turn their thoughts to the subject of hatching until February is in, so that for their benefit we will go back a little and consider the question of hatching, and especially the natural method, in which most amateurs are interested.

First of all, what of accommodation? Sitting hens must be kept quiet, so it will never do to leave them on what we may call the public nests, where they will be disturbed by every hen that wants to lay. Special nests should be made in an outhouse or building that is not much frequented, and for these nests we use orange boxes, which may be bought from a greengrocer for a few pence. They are already divided into three compartments of suitable size, and it is only necessary to nail a strip along the bottom and fix on a hanging-door with a pair of leather hinges to provide a first-class sitting-box.

It is a good plan to give the box a coat of Penetras or some other preparation of creosote, after which it is advisable to put in a shovelful of loose soil in each box, scoop it out to the form of a nest, and line it with plenty of soft hay. When you get a broody hen, put her on to one of these nests with a couple of nest eggs and shut her in. As a rule they settle down at once if they mean business, and if they are not quiet and contented after a couple of days it is obvious that they are not to be trusted. At any rate, do not put eggs under a hen until she is sitting hard, and then regulate the number according to her size. Thirteen is the favourite number for a medium-sized bird, and it should not be exceeded, at any rate at this time of year. Select eggs of nice size and regular shape, and leave out freaks of any kind.

It is not necessary to feed a sitting hen more than once a day, and apparently it is quite an easy matter to take her off and put her on again. But this is where method scores, for, as in most things, there are right ways and wrong ways. First of all, always try to get a hen to sit with her head facing the front of the nest. Then, when you go to take her off it is quite easy to put your hands under her wings and legs and lift her off without dragging any eggs out. Put her in a pen or coop to feed, and let her have a good handful of maize, some grit and green food, and plenty of water. If she stays off ten minutes at the beginning and about a quarter of an hour towards the end of the hatch she will have ample time to eat all she wants and make herself comfortable. But if you want to avoid fouled nests do not be in a hurry to put her back.

It is better to let a hen step back into her nest than to lift her on, because in the latter case it is difficult to avoid struggling, and that is how eggs are broken. When she is on and settled down it is advisable to see if she is quite comfortable. Some hens cannot be trusted to cover all their eggs, and will sit with one or both legs in the middle of the nest. See that the legs are well spread, and that all the eggs are tucked under the wings. Patience and quiet

handling are necessary. To frighten a hen by rough handling is to spoil everything, and if a bird is uneasy and wild it is better to get another to take her place without any delay, for sooner or later she is pretty certain to deceive you.

Eggs may be tested by holding them before a candle at any time after the eighth day. Those that are quite clear may be taken out, to be boiled up for the chickens. The eggs containing live chickens will be opaque but for an air chamber at the large end, with a clearly defined dividing line.

Continue the daily routine until the twentieth day, and then, if any eggs are hatching, do not remove the hen until all are off. Take care that none are crushed at this critical time, and remove the empty shells two or three times during the day.

THE ROTATION OF PRODUCTION.

By J. W. HURST.

FOWLS.

The putting down of eggs for incubation is now a matter of supreme importance, and we begin to realise the inequality of broodiness to requirements. Those with whom winter laying is an object must set the eggs of the breeds that are most suitable for that purpose during this month, because, unless Wyandottes and Orpingtons (or other breeds that belong to the heavy brigade) are timed to hatch during March, a desirable autumnal maturity will scarcely be attained. It consequently follows that incubators must be brought into operation to an extent commensurate with the future needs as regards the renewal of stock and the possible demand for pullets in the fall. The supply of eggs for incubators and broody hens should now be largely obtainable from the older birds, many of which should be coming into laying condition and ready to commence a hatchable egg-production under the influence of careful management and judicious feeding. It must, however, be remembered that there are two sides to the breeding-pen, and that the males require watchful attention as regards condition, upon which the fertility percentage so largely depends. In addition to setting the eggs of the breeds mentioned, the subsequent needs relative to light breeds must be considered; if not already mated, pens should now be made up with a view to the supply of fertile eggs for putting down next month—so that the orderly succession of production may be maintained. Table-chickens hatched at the turn of the year must be kept growing and suffer no neglect on account of the claims of later arrivals. To maintain a healthy progress they should be kept on the move, shifting their coops as far as may be in accordance with the prevailing weather conditions. The state of the ground must influence the choice of situation, but with a considerable rainfall no site remains suitable very long, and not only is frequent removal conducive to the maintenance of health, but change of surroundings stimulates exercise—even when there is little material advantage in the way of natural food. Continue the use of quick growing and developing feeding stuffs, and add a little meat to the rations of the earlier-hatched chickens.

DUCKS.

Here, again, the work of incubation is of primary importance, the present necessity in this department being the setting of all available eggs without loss of time. Given the eggs in adequate supply, the measure of which depends upon previous work with the breeding stock, they may be very successfully hatched in incubators. In the use of machines for this purpose particular attention must be given to ventilation and moisture, with regard to which the directions of the makers should be carefully noted. A very successful incubating temperature during the first half of the twenty-eight days of the whole period is 102 degrees, increasing to 103 degrees during the second half; but unless the moisture is sufficient for the requirements of these eggs, some difficulty will be experienced at the time of hatching. Despite the limited needs of the young birds in this particular, it is obvious that rather more brooding is necessary so early in the season than is essential at a later period, and although in any case ducklings require less than chickens, the economy of production suggests the maintenance of a certain standard of warmth and comfort—if progress is to be rapid and the cost of feeding kept as low as possible. Although the generality of English duckling producers usually adhere to a hardier method, the subject of brooder-rearing and its relation to cost is one that requires fuller investigation with regard to its adaptability to our early requirements.

GEESE.

If these birds commence laying this month, as is probable where the conditions are favourable, the eggs—after the first two or three—should be suitable for setting, broody hens being used for the purpose. A hen of the barndoor type will cover five goose eggs, but it is usually preferable to limit the setting to four, the latter number being more easily adjustable and the risk of chilling reduced. The nests should be made on an earth bottom, when no sprinkling or damping will be necessary, but when put under hens the eggs should be turned once daily as on account of their size the birds cannot always accomplish this successfully. As hatching is in most cases improbable before next month, reference to the treatment of goslings may be deferred.

TURKEYS.

In cases where the sexes have been separated, the birds should now be mated for breeding, and when run on a good range the stock birds may be fed chiefly on oats. But if the conditions make a more extensive dietary necessary—including soft food and grain—the following will be suitable, and allow for sufficient variation: Barley-meal, biscuit-meal, ground oats, sharps, meat; oats, wheat, barley; swedes and kohl-rabi.

Diphtheria and Chicken-Pox.

Some observations made in Germany, published recently, support the assumption that fowl diphtheria and chicken-pox are produced by the same virus. By transferring the diphtheric membrane to sound birds changes were produced which simulated those characteristic of chicken-pox, and with the virus of the latter characteristic lesions were produced.

THE ABUSE OF THE JUDGING-STICK.**A NEEDFUL REFORM.**

THE time has surely arrived when some limit should be placed upon the indiscriminate and often totally unnecessary use of the judging-stick by visitors to poultry shows. The right of entry to an exhibition has apparently by long custom come to carry with it the right to wield a weapon which, in size and shape, may be anything from a short blunt wand to a small fishing-rod with a point not less sharp than that of a large knitting-needle. Such things are a danger even in the hands of experienced fanciers. One has only to look round a show to notice how roughly the judging-stick is applied to exhibits, especially when the bird inspected is not the property of the examiner. And most of us are familiar with the type of fancier—he is not always a novice either—who, armed with catalogue and stick, proceeds to prodde up every individual bird in the show, pausing now and then, when he sees a chance of an audience, to point out the differences between a Barred Rock and a Sebright Bantam, or to assert that those who made the awards must one and all be afflicted with colour-blindness. And what of the birds that endure two or three days of discomfort in the pens? Is it any wonder they are often returned home off colour, ill, and sometimes dead in their hampers? For injuries inflicted with judging-sticks are of more common occurrence than is generally realised, and frequently terminate fatally. A very recent instance we have in mind. The bird, a prize-winner—and it is remarkable how often the victims are prize-winners—was returned from a Northern show. It was dead when received by the owner, and post-mortem examination discovered a round punctured wound penetrating both skin and intestine, and causing a fatal peritonitis. This wound had been dealt in the show-pen thoughtlessly, or perhaps maliciously, and it looked as if a sharp-pointed judging-stick had been the weapon. Knowing of other instances of the same kind, we are prompted to ask: Can nothing be done to curtail the abuse of the judging-stick, or at least to ensure that none but a safe pattern tipped with a ball or button be authorised under Poultry Club rules? Moreover, it would abate the nuisance, and at the same time be a useful supplement to the takings of a show, if a small fee—say, 3d. a day—were imposed on all visitors who desired to use judging-sticks, though we almost go to the length of saying that they are only necessary to the judges. A regulation relating to the extra fee could easily be added by the Poultry Club to those already enforced on societies holding shows under their rules. No real fancier who desired to exercise the right would be likely to object to pay a few pence for a privilege which the careless and ignorant would prefer to decline rather than meet the expense attached to it. Something, however, ought to be done to protect the property of exhibitors against wanton damage at the hands of the judging-stick fiend, for injuries to exhibits are becoming of late much too frequent.

SOME COMMON DISEASES AND THEIR CURE.

By C. BRUCE TABERNER.

DISEASE will manifest itself even in the best-managed poultry-yards, and for this reason it is always as well to have a few simple remedies at hand, so that urgent cases may be treated without delay. The following remedies are all very reliable, and if used when the first symptoms appear they usually prove effective in preventing a severe illness.

The first remedy is for backward laying and producing new feathers, besides being an excellent tonic. It consists of the following ingredients, which can be procured at the chemists and mixed separately. Buy equal parts of gentian powder, liquorice powder, and carbonate of iron. To this add 4oz. of Peruvian bark powder, and mix all well together. A quarter of a teaspoonful should be given to each adult bird in the soft food. It must be used every morning for a fortnight, when it may be discontinued.

ROUP.—When the first symptoms appear it is best to isolate the bird at once, and add Condry's Fluid to all the drinking water. The affected bird should have the following pill night and morning: Mix a tablespoonful of ginger with a teaspoonful of castor oil, and make into pills of ordinary size. Ten drops of quinine (ammoniated tincture) should be given thrice daily in water. A little powdered sulphate of copper in the drinking water is good when a whole flock has to be treated. It must be given in earthenware drinking-vessels and not vessels that are made of metal.

LIVER DISEASE.—When fowls are blue in the comb and seem "out of sorts," they are generally suffering from this complaint. They ought to be fed sparingly on bread and milk and groats. Plenty of green food is necessary; also lean meat in small quantities. Half a teaspoonful of Epsom salts given in hot water every day will prove beneficial. A little charcoal is good in severe cases, mixed with quarter teaspoonful of magnesia and a little ground rhubarb.

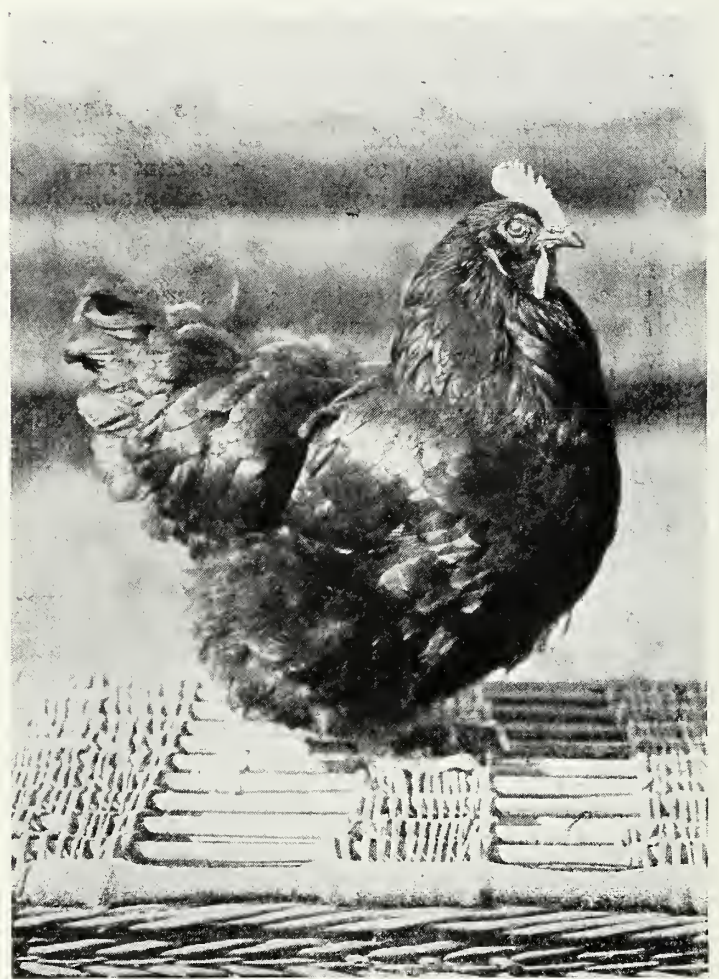
ANÆMIA.—This generally occurs partly through poor food and partly through bad surroundings, and it is always advisable, therefore, to attend to these two evils in the first place. Sulphate of iron is a useful remedy to employ in cases where poorness of blood is known to be the cause. A piece the size of a pea should be placed in the drinking water about twice or three times a week. Its excellent tonic properties are well known, and for this reason it is a good pick-me-up for fowls recovering from the moult, besides being useful during the breeding season. It should always be placed in earthenware drinking-vessels. Parrish's Chemical Food is another good remedy for anæmia.

BRONCHITIS.—This is usually caused by cold, damp weather, and suffering birds should be isolated in a warm pen, free from dust. Five to ten drops of ipecacuanha wine should be dropped in a little glycerine and given three times daily.

PIR.—This is usually a stomach trouble, and shows itself in the form of a dry, horny tongue, which goes black at the edges. Half a teaspoonful of flowers of sulphur added to the morning mash is good, and a little Epsom salts should be added to the drinking water. The tongue should be painted with glycerine to allay the irritation.

HEALTHY STOCK.

TO maintain fowls in a satisfactory state of health is of primary importance, but never is it more important than it is during the breeding season. None but healthy birds should be chosen to fill the breeding pen. By healthy birds, we do not mean birds that are apparently all right at the time of choosing them, but birds that have not ailed anything during the previous year. Only those birds, moreover, should be used that have had a clean bill of health from the time of their birth and those that have come from parents of good sound constitution. The latter cannot, of course, always be guaranteed, but, when possible, something should be known of their parentage. It is more difficult to maintain health during the breeding season than at any other time of the fowl's life, and when once the birds are mated, however perfect they may appear, if there be any dormant disease, or inherited weakness, the strain of copulation will very soon make the weakness apparent.



A BLACK ORPINGTON PULLET. Copyright.

In selecting pullets for breeding, the points that are principally regarded are colour, size, and type generally, and, if the poultry-keeper is a utilitarian, and is up-to-date in his methods, he selects the best layers in hopes of perpetuating the laying quality. These points are all of the utmost importance, and none of them should be neglected, since each in turn has an economic value. For instance, colour and type must be kept prominently to the fore, because a fowl is kept

for a specific purpose—for its winter laying powers, for its excellence in meat properties, for its beauty, or for some other feature that especially appeals to the owner. Therefore, if the colour and type are not present, the correlative economic or external properties of the particular breed cannot be depended upon.

The importance of selecting the best layers among the batch of hens cannot be, of course, for a moment doubted, since upon this selection much depends. We claim, however, that the preliminary work is selecting only those birds that are healthy and of sound constitution. Birds that, as chickens, have done well right through their career, from their birth to the age of breeding, and have retained their early promise, are the pullets that render the best account of themselves when the crucial time arrives.

We have mentioned the importance of selecting the best layers, which we again emphasise, for it is to be remembered that the two—prolificacy and health—usually, if not always, go hand in hand. In selecting the former, therefore, we invariably get, at the same time, health and vigour. The poultry-keeper may, however, have gone on the right lines in his choice of breeders of both sexes, but when this is done his work, so far as health is concerned, is by no means over, since everything possible must be done to maintain this condition, and so hand on to future generations of poultry this inestimable economic quality.

Unsanitary housing, no doubt, is responsible for more disease than any other form of bad management. In housing, it is more often ignorance than wilful neglect of the primary principles of hygiene that causes so much trouble. Ventilation is the point upon which most poultry-keepers err. The importance of fresh air cannot be too strongly emphasised, and very little experience is needed forcibly to bring this matter home to everyone. Pure oxygen is needed, and if this becomes exhausted many are the troubles that inevitably follow, especially to the respiratory organs. Besides this, it has an influence in other directions, which leads to several deadly diseases. One's own common sense is the best guide as to whether the house is overcrowded, or the ventilation insufficient, since no hard-and-fast rule can be laid down. What would be right in one case may be quite wrong in another. The construction of the house, such as height, &c., should be regarded, and, in addition to this, the breed of fowls that are kept must, to a large extent, determine the question.

Italian Breeds of Poultry.

Signor Mario Guardasoni, in a paper on the "Italian Races of Poultry," says that

"The Leghorn and Valdarno fowls are so much alike in appearance that many writers speak of the Valdarno as a variety of the Leghorn. Nevertheless, there is always a distinct difference in the leg colour, which is dark, and often black in the Valdarno hen, and always bright and yellow in the Leghorn. They also differ notably in points of precocity, prolificacy, sitting capacity, fattening qualities, and especially in the quality of their meat. The Valdarno hen cannot rival the Leghorn as a layer and in the quality of the eggs; but, on the other hand, it grows more rapidly, and its meat is more delicate."

THE TURKEY'S HISTORY.

INTRODUCED WITH TOBACCO AND POTATOES.

UNLIKE that other Christmas bird, the goose, the turkey cannot boast a long and eventful connection with domestic life, it cannot claim to have saved Rome from the Gauls, or to have been a sacred bird four thousand years ago. But as the *pièce de résistance* of the Yuletide table turkey has fairly and squarely won first place.

The history of the turkey is extremely interesting, says a well-informed writer in the *South Wales Daily News*, although its rise has been comparatively rapid. Previous to the year 1518, when the mainland of America was discovered, the bird was unknown to civilisation; 1524 saw its introduction to Europe, a number of semi-wild specimens being brought to the Court of Spain by American pioneers. It must have reached France very soon afterwards and thence, or direct from Spain, found a way to England. This probably happened in 1524, and, as bearing on the point, it is interesting to know that the crest of the Strickland family (of Norfolk) is a turkey-cock "rampant." From this it may be surmised that an ancestor of the present baronet first brought the birds to this country.

By 1541 they had attained such popularity—though still rare and much prized—among trenchermen that Archbishop Cranmer forbade the appearance of more than one dish of turkey-cocks at State banquets. Some fourteen or fifteen years later a great law dinner was held at Christmas, in course of which two turkey-cocks and two poults were served with much pomp and ceremony; 1573 saw them an established and recognised feature of Yuletide fare, especially in rural districts, for we find the old chronicler Tusser writing at this date:

Beef, mutton, and port, shred-pies of the best

Pig, veal, goose, and capon, and turkey well drest.

Barnaby Googe, in his famous "Four Books on Husbandry," also writes some five years later: "Turkey-cocks we have not long had among us, for before the year of our Lord 1530 they were not seen with us, nor, I believe, known to the old writers."

A ROYAL GORGE.

Turkeys were first eaten in France at the great banquet which was held to commemorate the marriage of Charles IX. and Elizabeth of Austria. A consignment arriving at St. Malo was immediately dispatched by some zealous local authority to the King's kitchen. This thoughtful action was not in vain. The King, the Queen-Mother, and the Cardinal de Lorraine ate so much, or so many, of the birds—delicately cooked and served on spits—that they were laid down by indigestion during the whole of the following day. Subsequently, King Charles established a turkey-breeding farm on his estate in the forest of St. Germain.

To come to more recent days, we find Darwin keenly interested in the origin and evolution of this gallinaeous species. Though there can be little doubt that the American mammoth bronze turkey is directly descended from the wild North American race, this has not always been accepted as fact. From experi-

ments conducted in India, in the course of which turkeys were found to deteriorate quickly, Darwin concluded that they could not be the product of a tropical country. On the other hand, well-known authorities asserted that white was entirely absent from the wild species, although it is a prominent characteristic of the domestic turkey. In the course of controversy, however, this latter point was conclusively disproved.

NATIVE HAUNTS OF THE BIRD.

The range of the wild turkey extends over the greater part of North America, including the vast forests of the Atlantic States, and stretching far to the North-West into Lower Canada. Southward, the bird is found in the Isthmus of Darien, while its range also comprises such variegated country as the Rocky Mountains and the West Indies. The habit of the bird is to congregate in warm, sheltered valleys during the winter and then, about mid-spring, to migrate to the rich uplands, where summer feeding is plentiful.

Of domestic varieties kept at the present day, eight are generally recognised. These are the Black, White, Grey, Cambridge Bronze, American Bronze, Narragansett, Fawn, and Ronquieres. The American Bronze is the most useful, as it is certainly the most popular, but Cambridge Bronze appears to be common in the Eastern counties, while the White shows signs of coming into fashion, chiefly as a show bird.

PANCAKES.

THOUGH many people regard the making of a pancake as one of the simplest things in the world, it is not really so, as both knowledge and skill are needed in order to prepare and cook the dainty little items successfully. A certain amount of practice, too, is indispensable. When well made and served tastefully, pancakes form an exceedingly nice and very popular dish, either savoury or sweet, according to taste. The following are a few most reliable recipes, the value of which we hope our readers will test for themselves.

ENGLISH PANCAKES.—Mix the batter a few hours before it is required, and set it in a cool place. In cold weather it will be all the better if allowed to stand overnight, and in either case it should be stirred well previous to being fried. For ordinary English pancakes the usual proportions are two tablespoonfuls of flour, a quarter of a pint of milk, one egg, and a saltspoonful of salt; if more eggs are used, then a smaller quantity of milk will suffice. When the pancakes are required, choose a small round frying-pan, make it thoroughly hot, and grease it well, then pour in a little of the batter. Keep the edges of the pancake free from the pan by slipping the point of a knife under them, and move the pan about gently to prevent all danger of sticking. When the under-side of the pancake is just lightly browned, turn it carefully and brown the other side. As each one is done, drain it for a minute on soft kitchen paper, then sprinkle it lightly with fine white sugar and fresh lemon juice, roll it up neatly and as firmly as possible, and keep quite hot until the others are fried. Serve on a hot dish paper or a folded napkin, the tiny rolls arranged

crosswise and garnished with quarters or slices of fresh lemon.

FRENCH PANCAKES.—Beat two ounces of butter to a cream, then add gradually two well-beaten eggs, a tablespoonful of fine white sugar, three tablespoonfuls of sifted flour, and a saltspoonful of salt, and mix thoroughly; moisten to a batter with about half a pint of milk, and stir briskly until perfectly smooth. Have ready four small round tin plates, with edges, and, after buttering these well, pour in the batter, being careful to pour an equal quantity into each, and bake in a quick oven for about twenty minutes. When done enough, turn out the pancakes very carefully and place two of them side by side on a hot dish, spread a little hot jam very lightly over the surface, and cover with the other two pancakes. Then cut them in neat pieces, beginning at the centre, sprinkle fine white sugar on the top, and serve as quickly as possible. If more pancakes are required, make six or eight and place them together in threes or fours, and, if preferred, a small quantity of stewed fruit beaten to a smooth pulp may be used instead of jam.

IRISH PANCAKES.—Beat up six perfectly fresh eggs until light and frothy, then add a little grated nutmeg, half a teaspoonful of salt, and fine white sugar according to taste; mix well and form into a smooth batter with cooked potatoes, which have been pressed through a moderately fine sieve and lightly seasoned with salt, and stir in two or three ounces of warmed butter. Fry the pancakes in the usual way, and as each one is cooked place a small quantity of hot jam in the centre, roll up neatly, and place it on its dish.

SAVOURY PANCAKES.—The pancakes mentioned above can very easily be changed into a savoury by simply omitting the sugar, jam, and stewed fruit, and adding a little pepper, very finely minced parboiled onion, chopped parsley, grated cheese, &c., &c. A very delicious savoury pancake is made as follows: Prepare the requisite quantity of batter in the usual manner, and when the pancakes are required fry them in a small frying-pan which has been well greased. As each one is cooked, spread it lightly with highly seasoned veal forcemeat, which has been made hot in readiness, roll it up neatly, and place it on a hot dish. Serve very hot, tastefully garnished with sprigs of parsley and slices of fresh lemon. Another method is just to brown the under-side of the pancake, then place a little of the forcemeat, or some finely-chopped, pleasantly-flavoured meat, game, fish, poultry, &c., &c., in the centre, fold the edges of the pancake over, so as to form a triangle, and when thoroughly hot through serve as already directed.

Eggs in America.

The United States "Agricultural Year-Book" states that data gathered from twenty shippers from June to November, 1910, inclusive, showed that 4.36 per cent. of the eggs received during that time were a total loss. There was a further partial loss for stale eggs, dirty eggs, and from other causes. Inquiry among country storekeepers in October showed that only about 25 per cent. of the eggs of that month would rank as "firsts" on the Chicago market, 60 per cent. as "seconds," due to long holding, 5 per cent. cracked, and 4 per cent. were rotten or stuck to the shells.

FEATHER - EATING.

THIS objectionable habit is common among poultry that are penned in close confinement; hence suburban fanciers are called upon to deal with the trouble more frequently than are those whose poultry have a wider range. But confined runs are not alone at fault, for the fact is that many different causes conspire to promote the habit of feather-eating. That it is begotten of idleness there can be little doubt, and a pen of young chickens kept almost exclusively cooped up, with a natural curiosity to peck at everything and anything handy, will soon discover that the stubs of growing feathers are soft and succulent, and learn to pick them just as easily as a child learns to bite its nails. In the same way adult fowls become addicted to it, and generally the pernicious example is set by one or two of these, the rest learning by imitation. When the culprits can be convicted on evidence they should be at once removed from the others, and unless of particular breeding value, may with advantage be consigned to the cook. The irritation of lice or the heating of the skin by improper food during the moult are often also the starting-point of the tendency, and when found to exist these influences are, of course, to be met by appropriate remedies. But perhaps the most common cause of the craving is a lack of sufficient animal food and of the salts of potash and sulphur in the diet allowed. The treatment then is a complete change of food for a few days; and a diet almost entirely of oatmeal, chopped meat, cabbage, and chopped onions, with no grain but oats, will be found effective. With the morning mash can be mixed some flowers of sulphur and bicarbonate of potash, in the proportion of a teaspoonful of each to every ten fowls. As a local application, we have found it useful to dust the skin and feathers with sulphate of quinine, mixing it with three-parts of insect powder to make it go further. The bitterness will help to cure the depraved taste, and continued attention to diet will prevent its recurrence.

Rosebank Laying Competition.

Mr. A. Little, whose appointment as Poultry Instructor at the Grootfontein Agricultural College, Cape Colony, we announced last month, has evidently impressed South Africans with his skill and practical knowledge as evidenced in the Rosebank Laying Competition, of which he took charge last May. We assume Mr. Little, whose success does not surprise, although it gratifies his numerous English friends, will not take up his new duties until the competition closes on May 15. We have not heard whether the Croad Langshan is to make its appearance at Grootfontein, but can hardly doubt but that will be the case.

Hens as Personal Recorders.

An American invention for trap-nests is being advertised in the States, from the description of which every hen has to keep her own time-sheet, which is evidently the way to do it. We quote from the announcements made: "As the hen enters the nest the gate closes, keeping out other hens, but allowing her to leave at will. On leaving the nest she stoops under a drop-board, and by so doing registers her mark on paper fastened to the incline down which she walks. This

is done by coloured crayon worn in a holder attached to the leg. Each hen has her individual colour, or combination of colours." What a pity the hens cannot be taught to put a metal disk in a slot or post up her own number. Yankee hens are evidently more teachable than English.



A WHITE COCHIN PULLET.

Poultry-Keeping in Alberta.

The *South Wales Daily News* says that in Alberta the hen is treated with the greatest respect owing to the money-making qualities of good poultry, and a number of the ready-made farms prepared for next spring have been laid out with a special view to the rearing of chickens. It is in poultry combined with stock and dairying that the farmer's wife or the woman farmer achieves her greatest success. Forty acres is a convenient area on which she can grow feed for cows, pigs, and hens. In the barns of the "ready-made" farms specially designed for poultry farmers it is anticipated that the settler will keep at least four to eight cows, 200 chickens, and a few pigs. At least ten acres should be devoted to the production of strawberries, currants, gooseberries, and various vegetables. With the addition of a horse, it would require at least five acres of alfalfa to produce hay and pasture sufficient for horses and cattle. The rewards for the diligent are great. The market is practically unlimited, and always increasing, and the demand is far in advance of the supply.

THE POULTRY INDUSTRY IN 1911.

WE have received from Mr. Edward Brown, F.L.S., Hon. Secretary of the National Poultry Organisation Society, a copy of his report on the Poultry Industry in 1911. As this has appeared in a very large number of papers, it is unnecessary for us to give it at length, but we have pleasure in giving a few of the more important details.

"In many respects the year under review was specially difficult. Coronation festivities, strikes, railway troubles, and national prosperity have all had their respective influences. Demand, more especially for the better qualities, has increased more rapidly than the supply, as a result of which prices have been higher than ever known. The shortage of eggs during the last quarter was serious, doubtless due to later laying as the result of the dry, hot summer. The need for systematic and determined attention to increase of winter egg supply is more and more pressing, and the fringe of this question has only just been touched. That it is capable of solution is undoubted. The great majority of farmers and other poultry-keepers evidently believe in the line of least resistance. That, however, is not the way to success.

"It is satisfactory to note that efforts are being put forth to give greater attention to the production of high-class table poultry throughout the country, which branch has been somewhat neglected of late. The opportunities are great. A vast amount of loss arises from the bad methods in vogue. The killing of lean poultry is an economic blunder. Under present conditions, in the greater part of the country there are no opportunities for remedying this state of affairs. Careful experiments are required to discover cheaper methods of production and fattening.

"Attention has been called in previous reports to the need for greater production of turkeys, and there are signs that more is being done in this way, though not to the extent required. In spite of a larger importation for Christmas, the demand for best quality birds was very great, and the prices of these were well maintained. What should be sought for is to increase the period of general consumption, instead of concentrating all supplies for the festive season.

"The comparative values of eggs and poultry imported during the last three years, after deducting re-exports of poultry, are as follows:—

	1909.	1910.	1911.
Eggs.. ..	£7,233,932	£7,296,145	£7,965,809
Poultry	884,429	788,131	840,014
Totals.. ..	£8,118,361	£8,084,276	£8,805,823

"It will be seen, therefore, that there has been a large increase in the values of eggs imported, amounting to no less than £669,664, due to the prices having advanced again to a considerable extent, more than in other countries. I have evidence that the publication of my 'Interim Report on the Poultry Industry in Germany' last January, and the conclusions therein submitted, have had a very marked effect in Continental countries, leading to increased shipments, which have been stimulated by rapid advance of prices on this side. Whether this is a temporary increase remains to be seen, it being dependent upon how far demand and values grow elsewhere. The future must show how far my anticipations are correct.

"From the Trade and Navigation Returns for 1911, I find that the number of eggs imported from all countries was 19,057,895 great hundreds, or 2,286,947,400, or upwards of 158,000 tons. The maximum year as to quantities was 1904, when the figures were respectively 19,942,549 great hundreds, or 2,381,867,640, whereas the values in that year were £6,730,574, so that in 1911, although the number of eggs received was 884,699 great hundreds fewer than in 1904, we paid £1,235,235 more for those imported.

"The average values of all eggs imported since 1898 show an advance in that period of 2s. 6½d. per 120, or 43.57 per cent. In spite of the greatly increased volume of supplies, the average value has advanced 5d. per 120 from 1910 to 1911.

"In future the weight of poultry imported will be given by the Board of Trade, an alteration which has often been asked for, and will enable us to make comparisons hitherto impossible.

"Interesting features of the returns are the increase of supplies from Russia and the partial recovery of those from the United States, which for the last four years have shown a steady decline.

"As I understand that the Poultry Production Census, taken in 1908, is to be published immediately, we should then be in a position to estimate home production, but it may be well to show to what extent Great Britain imports eggs and poultry. Therefore, the Irish figures for 1910 may be given:—

TOTAL IMPORTS.			
Eggs :	Foreign (1911)	£7,965,809	
	Irish (1910)	2,744,131	£10 709,942
Poultry :	Foreign (1911)	840,014	
	Irish (1910)	927,035	1,767,049
Grand total			£12,476,991

PROPOSED TABLE POULTRY CLUB.

To the Editor of the ILLUSTRATED POULTRY RECORD.

SIR,—A meeting of the sub-committee was held at Room 109, Temple Chambers, E.C., lent by the Small Owners, Ltd., on January 10, 1912.

After prolonged discussion it was thought advisable that before making a definite proposition to the Utility Poultry Club, it would be best to ascertain the general opinion of those interested in the aims of the proposed Club.

It was proposed by Mr. E. Brown and seconded by Mr. Farrer that a letter be sent to the Press inviting promise of support from all those not already members of the U.P.C., who are interested in the development and improvement of table poultry, and would be prepared to join the U.P.C., if definite steps were taken to further the interests of this particular branch of the industry.

The general feeling of those present was in favour of co-operation with the U.P.C. rather than to start a separate organisation.

We shall be much obliged if all those who are willing to become members of the Club on these conditions will communicate as soon as possible with Mr. Henfrey.

The minimum subscription to the Utility Poultry Club is 2s. 6d., although larger subscriptions are invited.

Yours faithfully,

W. Henfrey,
Hon. Secretary,

The Dower House,
Langley Park, Beckenham.

T. H. WHEELER,
Chairman.

THE POULTRY CLUB.

THE Monthly Meeting of the Council was held on Friday, January 12, at 2 p.m., at the London Chamber of Commerce, Oxford Court, Cannon Street, London, E.C., when there were present: Mr. H. Wallis (chair), Rev. T. W. Sturges, Rev. E. Lewis Jones, Captain R. R. Allen, Messrs. W. Clarke, W. Bibby, R. Fletcher Hearnshaw, F. D. Little, W. Richardson, F. J. Broomhead, W. Rice, T. Firth, E. A. Cass, W. J. Golding, J. Horn, J. S. Hicks, T. Threlford, and G. Tyrwhitt-Drake, Hon. Sec. and Treasurer.

A vote of sympathy was passed to Mr. O. F. Bates on the death of his wife.

Mr. H. Wallis stated that Mr. Verrey sincerely regretted he was unable to attend the Council meeting owing to a slight accident.

The following new members were duly elected: Recommended by Middlesex Branch—A. W. Dance, 1, Ossulton Villas, Norwood Road, Southall; G. B. Gush, Marden Lodge, The Woodlands, Isleworth.

Recommended by Cornwall Branch—J. Phillips, Clinton Road, Redruth; Charles Vernon Everitt, Mount Whistle, Camborne; W. H. Brewer, Albert Terrace, Lostwithiel; J. Rawlings, jun., Oldwit, South Petherwin; W. H. Pethybridge, Mylor, Penryn, Cornwall.

Recommended by Essex Branch—Alfred Ashcroft, Pretoria Villa, Cross Road, Maldon, Essex.

Recommended by Mr. J. C. Hunting—Mrs. Gutterbock, Middle Green, Langley, Bucks.

Recommended by Sussex Branch—Saxby Hurst, West Leigh, Bexhill-on-Sea; Misses F. and E. Chambers, Crossways, Market Livingston, Wilts; E. J. Francis Davies, Blue Poultry Pens, Talgarth, R.S.O., Breconshire; James Garrow, 33, Alva Place, Abbey Hill, Edinburgh; Captain R. W. S. Stanton, Lullingworth, Painswick, near Stroud, Glos.; H. V. Prior, Crown Poultry Yards, Kenfig Hill, Glamorgan; Miss Amy C. Golding, Railway Hotel, Hayward's Heath.

The following societies were duly associated: Recommended by Surrey Branch—Guildford Fanciers' Association, Hon. Sec., E. Stevens, 7, Manor Road, Guildford.

Recommended by Essex Branch—Rayleigh and District Fur and Feather Society, Hon. Sec., Reginald Wills, The Inglenook Poultry Farm, Rayleigh, Essex.

The Buff Leghorn Club, Hon. Sec., H. T. N. Allatt, Thumblands, Farnham, Surrey; the British Rhode Island Red Club, Hon. Sec., George Scott, The Windmill, Pudsey, Yorks.

The following shows were announced to be held under Club Rules and specials allotted: Rayleigh, Buchan, Guildford, Denbighshire and Flintshire, Southall.

CORRESPONDENCE.—A letter from Mr. H. Grainger, resigning his post as Hon. Secretary of the Staffordshire Branch, was read and accepted. A letter from the Secretary of the Ancona Club, thanking the Council for the grant of the Ancona Cup, was read. The Hon. Secretary was instructed how to deal with other correspondence.

The Hon. Secretary, on behalf of Mr. S. W. Thomas, who was unable to be present, asked the Council to certify that the resolution passed at the last Council meeting re Carmarthen prize-money was an award under old Rule 26.

The chairman ruled that an ordinary Council meeting could not in any way deal with business done at an Extraordinary Council meeting, but that he thought a full report of the minutes of the Extraordinary Council meeting, certified by the Hon. Secretary, might be sent to Mr. Thomas and any other of the interested parties who applied for same.

AMALGAMATION OF HUNTS AND BEDS WITH CAMBS.—A letter from Mr. W. Driver, Hon. Sec. of the Cambridge-shire Branch, asking the Council's sanction to the amalgamation of the Counties of Hunts and Beds with Cambridge-shire for Poultry Club purposes, was read, and this was agreed to.

The Breed Cup Sub-Committee's report, as follows, was

then brought forward: (A) That the class or classes, for the breed for which a cup is offered, must be open to all Poultry Club members residing in the county in which the show is held. (B) That wins in a mixed breed or A.O.V. class, or of less value than a first, do not qualify. (C) That the Breed Cup be not offered at Specialist Club Shows, except in the cases where the Club caters for *all* varieties of the breed, and then subject to Condition A.

With regard to Clause A, a long discussion took place in which some members were of the opinion that the Breed Cups should be offered only at open shows, while others favoured a radius of not less than one county, and others that they be left as at present.

It was proposed and seconded that the Breed Cups be only granted to shows where all members of the Poultry Club can compete for them. This, on being put to the room, was carried by 8 votes to 4.

Members of the Breed Cup Committee then asked leave to withdraw Section B as their Clause A had not been adopted, and Clause C was also withdrawn.

Mr. W. Bibby asked the Council's ruling on the mode of procedure in cases of investigation by County Committees. He explained his reason for bringing this request forward—namely, that, in his experience, County Committees varied greatly in the way in which they dealt with cases. After discussion the Council gave as their opinion that the mode of procedure should be that which usually obtains in the Courts of Summary Jurisdiction, as far as it is possible.

The next meeting of the Council will be held at the London Chamber of Commerce, Oxford Court, Cannon Street, London, E.C., on Friday, February 9, at 2 p.m. All prospective members' names must reach the Hon. Secretary on or before February 1, and if residing in a county having a Branch through the Secretary of same.

G. TYRWHITT-DRAKE, Hon. Secretary.

THE UTILITY POULTRY CLUB.

FOUR MONTHS' LAYING COMPETITION
1911-12.

WITH the reports of the third month, ending January 8. To hand, the Competitions enter on their final stage. Mr. Wm. Barron, of Bartle, near Preston, who is managing the Northern Competition, reports a total of 2,123 eggs during the month, and Mr. George Nicholls, of Grimley, Worcester, on whose farm and under whose management the Southern Competition is taking place, reports the still larger total of 2,423 eggs laid in the twenty-eight days.

The Competitions have been held yearly since 1898, and in the present Competition forty pens of four pullets each are competing for prizes given in accordance with the values of the eggs laid. Trap-nests are used, so that the score of each bird is kept. The full report of the managers, who welcome visitors to the Competitions, and the full score of the competing pens is given herewith.

L. W. H. LAMAISSON, Hon. Sec.

Merstham, Surrey, January 16, 1911.

MANAGER'S REPORT ON THE NORTHERN COMPETITION FOR
THE FOUR WEEKS ENDING JANUARY 8, 1912.

The third month has now been completed, and I am pleased to say the birds have done all that could be desired when we take into consideration the weather—a wet, damp, foggy month, and little sunshine, and the remaining days ending with hail, rain, and a snowstorm on successive days.

During the month 124 birds out of 160 have contributed 2,123 eggs—surely a performance worthy of notice.

There has not been a single case of cold during the month. Numbers 16—27, 79—102 have been broody, but numbers 16 and 27 have again commenced to lay.

(Signed) WILL BARRON.

Bartle Poultry Farm, Bartle, near Preston.

NORTHERN COMPETITION. NUMBER OF EGGS.

Order.	Pen.	Breed.	3rd Month.				Total.	Value.			Remark.
			1st Two Months.	1st Grade.	2nd Grade.	3rd Grade.		£	s.	d.	
1-24..	Buff Orpingtons	..151	..40	..14	..28	..233	..1	13	10	..	
2-1..	White Wyandottes	..139	..44	..13	..15	..211	..1	11	24	..	
3-21..	"	..144	..38	..11	..18	..211	..1	10	10	1/4	
4-6..	"	..125	..44	..8	..25	..203	..1	10	14	..	
5-3..	"	..124	..33	..22	..21	..200	..1	9	3	..	
6-15..	"	..121	..22	..20	..27	..193	..1	8	7	1/4	
7-14..	"	..115	..43	..6	..21	..193	..1	8	1	..	
8-8..	"	..94	..74	..8	..6	..182	..1	7	11	1/2	
9-4..	"	..119	..31	..14	..19	..183	..1	6	8	1/4	
10-22..	"	..113	..40	..10	..11	..174	..1	5	6	..	
11-34..	Buff Rocks	..96	..61	..6	..7	..170	..1	5	5	..	
12-27..	Buff Orpingtons	..105	..17	..10	..38	..170	..1	4	11	..	
13-12..	White Wyandottes	..86	..22	..22	..32	..162	..1	3	7	1/4	
14-7..	"	..107	..10	..8	..40	..165	..1	3	6	3/4	
15-10..	"	..99	..9	..13	..47	..163	..1	3	3	1/4	
16-19..	"	..90	..33	..7	..27	..157	..1	2	3	1/2	
17-30..	White Leghorns	..93	..33	..1	..7	..140	..1	0	11	1/4	
18-29..	"	..82	..44	..11	..3	..140	..1	0	11	1/4	
19-11..	White Wyandottes	..67	..53	..11	..3	..134	..1	0	6	1/4	
20-31..	White Leghorns	..87	..10	..11	..35	..143	..1	0	4	3/4	
21-9..	White Wyandottes	..55	..72	..3	..2	..132	..1	0	4	1/2	
22-23..	"	..89	..22	..13	..13	..137	..0	19	11	1/4	
23-2..	"	..79	..9	..13	..34	..135	..0	19	5	1/4	
24-28..	Buff Orpingtons	..98	..5	..9	..27	..139	..0	19	4	3/4	
25-25..	"	..60	..43	..6	..12	..126	..0	18	10	..	
26-18..	White Wyandottes	..95	..11	..4	..8	..118	..0	17	6	1/4	
27-36..	Buff Rocks	..50	..55	..5	..3	..114	..0	16	1	1/4	
28-5..	White Wyandottes	..60	..15	..3	..27	..105	..0	15	1	1/4	
29-25..	Buff Orpingtons	..90	..—	..—	..16	..106	..0	14	1	1/4	
30-32..	Black Leghorns	..61	..18	..7	..5	..91	..0	13	10	1/4	
31-38..	Anconas	..45	..38	..3	..—	..86	..0	13	3	1/4	
32-20..	White Wyandottes	..44	..32	..7	..1	..84	..0	12	10	1/4	
33-37..	Anconas	..35	..19	..14	..16	..84	..0	12	8	1/4	
34-13..	White Wyandottes	..35	..28	..13	..6	..83	..0	12	3	1/4	
35-40..	Speckled Sussex	..42	..21	..1	..3	..67	..0	10	10	..	
36-16..	White Wyandottes	..19	..20	..2	..—	..4	..0	6	5	3/4	
37-35..	Buff Rocks	..14	..20	..1	..—	..35	..0	5	6	1/4	
38-33..	Brown Leghorns	..27	..8	..2	..—	..37	..0	5	5	1/4	
39-39..	Buff Orpingtons	..4	..8	..3	..17	..32	..0	4	7	1/4	
40-17..	White Wyandotte	..9	..4	..5	..4	..22	..0	3	3	1/4	

MANAGER'S REPORT ON THE SOUTHERN COMPETITION FOR THE FOUR WEEKS ENDING JANUARY 8, 1912.

The third month (twenty-eight days), which closed on January 8 showed the splendid record of 2,423 eggs laid by 143 pullets, of whom 134 were laying at the end of the month.

This shows an improvement of 493 on the corresponding period last year.

WEATHER; The mild, spring-like weather of November changed to a wet, cold December, rain falling on twenty-five days, accompanied by a cold north-east wind. Snow fell upon the last day of the month.

The lowest reading of the thermometer was seven degrees of frost. These adverse conditions checked the yield of eggs considerably.

PEN TOTALS: The highest pen total is 88, scored by No. 24, Buff Orpingtons; 33, first grade; 52, second grade; and 3, third grade, made up of the following contributions: No. 13, 20; No. 14, 20; No. 15, 24; No. 16, 24.

Pen No. 21, White Leghorns, secures second place with a total of 87—30 first grade, 44 second grade, 13 third grade, and made up of the following: No. 149, 23; No. 150, 21; No. 151, 21; No. 152, 22. This pen had the highest score for both the first and second months.

Pen No. 29, Buff Rocks, close up for third place, with a total of 86.

The following have also done well: Pen No. 1, White Wyandottes, 82 eggs. Pen No. 12, White Wyandottes, 80 eggs.

INDIVIDUAL SCORES Individual scoring has been very

good indeed, 27, 26, and 25 eggs being laid by no fewer than eight birds—viz.:

White Wyandotte, No. 122, in pen 16	...	27	eggs.
Buff Orpington	" 2, " 1	26	"
"	" 8, " 23	26	"
"	" 24, " 25	26	"
"	" 48, " 28	26	"
Croad Langshan	" 128, " 40	26	"
White Wyandotte	" 83, " 11	25	"
Croad Langshan	" 120, " 39	25	"

Forty-four other birds have scores ranging from 20 to 24.

The highest individual score obtained by the Light Breed is—White Leghorn, No. 149, in pen 21, 23 eggs.

The month has been a severe trial for all light-feathered birds, but they have borne the test of stamina well, as shown by Leghorns still holding their forward position.

HEALTH: There is a fresh case of neck moult with No. 37 in pen 27; a slight tail moult to No. 156, pen 20; a slight dropping of feathers with No. 144, in pen 34. This, although not sufficient to make her look other than well, evidently prevents her laying, as she laid one egg at the end of the first month, but no further contribution.

One bird suffering from round worms, in pen 4, has been attended to, and I think cured.

BROODINESS: The cold weather has helped to check this, four birds only falling victims and these in the last week of the month—viz., No. 56, in pen 29; No. 92, in pen 12; and Nos. 79 and 80, in pen 32—the two former for the second time in the three months.

Seven birds only have failed to score, of which number four were backward on arrival and three suffered from a severe moult.

(Signed) GEO. NICHOLLS.

Grimley Poultry Farm, Worcester.

SOUTHERN COMPETITION. NUMBER OF EGGS.

Order.	Pen.	Breed.	3rd Month				Total.	Value.			Remarks.
			1st Two Months.	1st Grade.	2nd Grade.	3rd Grade.		£	s.	d.	
1-21..	White Leghorns	..156	..30	..44	..13	..243	..1	15	6	..	4L
2-25..	Buff Orpingtons	..130	..74	..2	..—	..206	..1	11	5	1/4	4L
3-29..	Buff Rocks	..129	..22	..51	..13	..215	..1	11	2	3/4	3L 1B
4-24..	Buff Orpingtons	..115	..33	..52	..3	..203	..1	10	0	1/4	4L
5-32..	Buff Rocks	..123	..27	..30	..7	..187	..1	8	0	..	1L 2B
6-36..	Rhode Island Reds	..104	..33	..37	..5	..179	..1	6	10	..	4L
7-28..	Buff Orpingtons	..104	..45	..10	..10	..169	..1	5	8	..	3L
8-35..	Rhode Island Reds	..88	..47	..20	..—	..165	..1	5	3	1/4	4L
9-13..	White Wyandottes	..102	..18	..45	..8	..173	..1	5	2	..	4L
10-12..	"	..86	..59	..26	..4	..166	..1	4	7	1/4	3L 1B
11-12..	"	..79	..56	..19	..—	..154	..1	3	8	1/4	4L
12-19..	White Leghorns	..95	..51	..4	..1	..151	..1	3	0	..	4L
13-11..	White Wyandottes	..70	..66	..12	..1	..149	..1	2	11	1/4	4L
14-15..	"	..99	..29	..25	..—	..153	..1	2	7	..	3L
15-5..	"	..95	..30	..16	..—	..141	..1	0	10	1/4	3L
16-14..	"	..93	..27	..11	..2	..138	..1	0	7	1/4	3L
17-18..	White Leghorns	..68	..40	..19	..6	..133	..0	19	10	1/4	4L
18-1..	White Wyandottes	..45	..38	..43	..1	..127	..0	19	2	1/4	4L
19-26..	Buff Orpingtons	..60	..35	..26	..3	..124	..0	18	5	..	4L
20-40..	Croad Langshans	..51	..52	..10	..2	..115	..0	18	0	..	3L
21-8..	White Wyandottes	..50	..55	..11	..—	..116	..0	17	7	1/4	4L
22-7..	"	..51	..20	..26	..18	..115	..0	17	2	1/4	4L
23-30..	Buff Rocks	..42	..54	..12	..1	..109	..0	16	9	1/4	4L
24-33..	Silver Campines	..53	..20	..19	..17	..109	..0	16	1	..	4L
25-22..	White Leghorns	..60	..30	..12	..—	..102	..0	15	10	1/4	2L
26-9..	White Wyandottes	..42	..3	..39	..13	..97	..0	14	5	1/4	3L
27-20..	White Leghorns	..73	..22	..—	..—	..95	..0	14	3	..	3L
28-10..	White Wyandottes	..35	..—	..40	..21	..96	..0	14	1	1/4	3L
29-16..	"	..32	..40	..5	..14	..91	..0	14	0	..	3L
30-17..	White Leghorns	..48	..22	..21	..6	..97	..0	13	8	..	4L
31-37..	Rhode Island Reds	..41	..35	..10	..2	..88	..0	13	6	1/4	3L
32-4..	Buff Leghorns	..56	..31	..—	..—	..87	..0	13	4	1/4	3L
33-3..	White Wyandottes	..17	..39	..23	..6	..85	..0	12	10	..	4L
34-27..	Buff Orpingtons	..45	..4	..29	..10	..88	..0	12	8	1/4	3L 1M
35-38..	Partridge Wyandottes	..37	..42	..1	..—	..80	..0	12	4	1/4	2L
36-39..	Croad Langshans	..16	..37	..29	..—	..82	..0	12	4	1/4	3L
37-23..	Buff Orpingtons	..9	..60	..3	..—	..72	..0	11	0	1/4	3L
38-6..	White Wyandottes	..18	..53	..—	..—	..71	..0	11	8	1/4	4L
39-31..	Buff Rocks	..9	..43	..5	..—	..57	..0	8	9	1/4	3L
40-34..	Silver Campines	..17	..2	..23	..11	..53	..0	7	9	..	2L

NORTHERN UTILITY POULTRY SOCIETY.

LAYING COMPETITION, 1911-12.

Under the Management of

Messrs. Burrell & Thornton, Whittlefield Farm, Burnley.

REPORT OF THE THIRD MONTH.

THE weather during the month has been rather better than last month. Rain fell on fifteen days, two days were foggy, and the last four days were a mixture of hail, rain, frost, and snow, the pens being covered with snow to a depth of several inches on the last day.

Twenty-three birds have failed to lay during the three months, as follows: Nos. 2, 26, 27, 38, 64, 66, 133, 135, 137, 139, 140, 141, 142, 143, 144, 147, 150, 151, 167, 171, 182, 187, and 188.

In addition to the above, the following birds have not laid during the third month: Nos. 6, 7, 13, 14, 16, 29, 60, 89, 101, 102, 121, 124, 129, 132, 134, 136, 154, 163, and 164.

Broodiness has not been so much in evidence, only three birds being affected—Nos. 46, 60, and 86.

The following are moulting: Nos. 13, 14, 57, 60, 82, 102, 121, 129, 151, 154, 163, 172, 174, and 175.

The two birds reported lame in last month's report have both been returned to their pens, and have commenced to lay.

The health of the birds is "good."

No. 11 holds the record for the month with twenty-five eggs. Nos. 47, 189, and 131 have laid twenty-four eggs. Thirty other birds have laid twenty eggs or over.

Pen No. 27 of Buff Orpingtons win half-cwt. Perfection Chicken Food, given by Messrs. J. Cornall and Sons, Kirkham, for pen making highest score during the third month.

C. LONGBOTTOM, Hon. Secretary.
28, St. Matthew Street, Burnley.

RESULT OF FIRST, SECOND, AND THIRD MONTH.

No.	BREED.	EGGS LAID.			Total Points Scored.	REMARKS.
		1st M'th.	2nd M'th.	3rd M'th.		
1	White Wyandottes	18	39	42	611	3 Laying.
2	"	34	59	41	812	2 "
3	"	40	77	66	1003	4 "
4	"	51	34	17	551	1 " 13, 14, M.
5	"	11	37	75	753	4 "
6	"	81	50	58	1156	4 "
7	"	8	44	28	541	2 "
8	"	46	31	27	600	2 "
9	"	31	72	65	983	3 "
10	"	42	42	50	786	3 "
11	"	—	32	27	379	2 "
12	"	37	58	49	813	3 " 46, B.
13	"	80	55	49	1123	3 "
14	"	40	70	74	1120	4 "
15	"	83	76	29	1106	2 " 57 M. 63 B. M.
16	"	7	24	43	441	3 "
17	"	10	12	29	312	3 "
18	"	24	43	32	508	2 "
19	"	48	60	73	999	3 "
20	"	87	55	51	1097	3 "
21	"	42	25	18	442	1 " 82, M.
22	"	59	15	20	495	2 " 86, B.
23	"	85	70	64	1254	3 "
24	"	75	72	68	1232	3 "
25	"	10	69	48	844	3 "
26	Buff Orpingtons....	64	24	11	531	2 " 102, M.
27	"	62	79	82	1330	4 "
28	"	4	13	56	488	3 "
29	"	73	45	68	918	4 "

RESULT OF FIRST, SECOND, AND THIRD MONTH—Contd.

No.	BREED.	EGGS LAID			Total Points Scored.	REMARKS.
		1st M'th.	2nd M'th.	3rd M'th.		
30	Buff Orpingtons	65	34	50	896	3 Laying
31	"	41	19	31	482	2 " 121, M.
32	"	26	44	47	756	4 " "
33	Light Sussex	31	41	39	633	2 " 129, M.
34	Speckled Sussex....	17	33	—	—	—
35	Rhode Island Reds	—	—	2	14	1 " "
36	Columbian Wyandottes	—	—	—	—	—
37	Buff Rocks	11	18	29	378	2 " "
38	"	13	8	25	293	2 " 151, M.
39	"	31	42	36	678	2 " 154, M.
40	Valdarnos.....	—	25	31	355	4 " "
41	White Leghorns ..	40	42	26	580	2 " 163, M.
42	"	33	54	40	795	2 " "
43	"	35	46	41	707	2 " 172, M.
44	"	20	35	20	425	1 " 174, 175. M.
45	"	64	75	64	1182	3 " "
46	"	32	30	30	521	3 " "
47	"	19	11	3	206	—
48	"	45	87	76	1218	4 " "
Total eggs laid ..		1781	2028	1960		

Useful Hints on Poultry.

We have received a copy of this valuable little book, published by *Farm and Home*. It contains much information needed by practical poultry-keepers, including Poultry Ailments; How to Give Medicine to Poultry; Beginning of the Moulting; Shell-less Eggs; Hatching Failures; Winter Rearing; Hints on Foster-Mothers; and Preparing Poultry for Market. Its price is only 1½d., post free, from the Publishers, 17, Furnival Street, Holborn, E.C.

Poultry in New South Wales.

The *Sydney Mail* states that poultry farms are rapidly increasing in that colony, and records that along the southern highlands, between Sydney and Moss Vale, the conditions are very favourable, and there are several farms which are self-supporting, while on others, where small fruits, such as strawberries, are grown, the poultry is responsible for more than half the income. It is surprising, too, the number of people who, well on in years, make a comfortable competence from the fowls. At Mittagong it is claimed there are more eggs loaded at the local railway station than at any other southern line station. Ingleburn also possesses quite a cluster of poultry farms, on which table as well as egg-laying stock are raised.

Cock Fighting in Ancient Britain.

Mr. Alfred Bulleid, writing in the *Illustrated London News*, mentions the fact that the spur of a fighting cock has been found in the remains of the Lake Village, near Glastonbury, Somerset, which appears to be a further proof that cock fighting was a popular sport among the Britons of two thousand years ago. As is well known, when the Emperor Cæsar invaded this country with his Roman legions he found it a great pastime, and it is credibly surmised that it was introduced by the Phœnicians, who came to Cornwall for tin ore from the mines of the Duchy.

The Poultry Club Year-Book.

We have received from the Hon. Sec. of the Poultry Club the 1912 Year-Book, and a very imposing volume it is. It has already been sent to all members of the Club, but non-members can have a copy on application to the Hon. Sec., enclosing 6d. in stamps. We shall refer to this book again in a later issue.

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS DURING THE FOUR WEEKS ENDING JAN. 20, 1912.

ENGLISH POULTRY—LONDON MARKETS.

DESCRIPTION.	PRICES REALISED DURING THE MONTH.			
	1st Week.	2nd Week.	3rd Week.	4th Week.
Surrey Chickens	3/0 to 4/6	3/0 to 4/6	2/9 to 4/6	3/0 to 4/6
Sussex	3/0 " 4/6	3/0 " 4/6	2/9 " 4/6	3/0 " 4/6
Yorkshire	2/6 " 4/0	2/0 " 4/0	2/3 " 3/6	2/3 " 4/0
Boston	2/3 " 4/0	2/3 " 4/0	2/3 " 3/6	2/3 " 4/0
Essex	2/3 " 4/0	2/3 " 4/0	2/3 " 4/0	2/3 " 4/0
Capons	5/0 " 7/0	5/0 " 7/0	5/0 " 7/0	5/0 " 7/0
Irish Chickens	2/0 " 2/9	2/0 " 2/9	2/0 " 3/3	2/3 " 3/6
Live Hens.....	2/0 " 2/9	2/0 " 2/9	1/9 " 2/6	2/0 " 2/9
Aylesbury Ducklings	—	—	—	—
Ducks	3/0 " 5/0	3/0 " 5/0	3/0 " 5/0	3/0 " 5/0
Geese	5/6 " 8/6	5/6 " 8/6	5/0 " 8/6	5/6 " 7/6
Turkeys, Cocks ..lb.	0/8 " 1/0	0/8 " 1/0	0/8 " 1/0	0/8 " 1/0
" Hens ..lb.	0/8 " 0/11	0/8 " 0/11	0/9 " 0/11	0/9 " 0/11

ENGLISH GAME—LONDON MARKETS.

DESCRIPTION.	PRICES REALISED DURING THE MONTH.			
	1st Week.	2nd Week.	3rd Week.	4th Week.
Grouse	1/9 to 2/3	1/9 to 2/3	1/6 to 2/0	1/9 to 2/0
Partridges.....	1/3 " 2/3	1/3 " 2/3	1/6 " 2/3	1/6 " 2/6
Pheasants	—	—	—	—
Black Game	1/6 " 3/0	1/6 " 3/0	1/3 " 1/6	1/3 " 1/6
Hares	1/3 " 2/6	1/3 " 2/6	1/0 " 2/6	1/0 " 2/6
Rabbits, Tame	0/6 " 1/0	0/6 " 1/0	0/6 " 1/0	0/6 " 0/9
" Wild	—	—	—	—
Teal	—	—	1/0 " 1/3	1/0 " 1/3
Widgeon	—	—	1/3 " 1/6	1/3 " 1/6
Wild Duck	1/9 " 2/3	1/9 " 2/3	2/0 " 2/9	2/0 " 2/6
Woodcock	2/0 " 3/6	2/6 " 3/6	2/6 " 3/0	2/3 " 2/9
Sniipe	0/9 " 1/3	0/9 " 1/3	1/0 " 1/6	1/0 " 1/4
Golden Plover.....	—	—	1/0 " 1/3	1/3 " 1/6

ENGLISH EGGS (Guaranteed New-Laid).

MARKETS.	PRICES REALISED DURING THE MONTH.			
	Per 120.	Per 120.	Per 120.	Per 120.
LONDON	17/- to 19/-	17/- to 18/6	17/- to 18/6	15/- to 17/0
Provinces.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.
MANCHESTER ...	1/9	1/8	1/7	1/7
BRISTOL	2/0	2/0	1/10	1/10

FOREIGN POULTRY—LONDON MARKETS.

COUNTRIES OF ORIGIN.	PRICES REALISED DURING THE MONTH.			
	Chickens. Each.	Ducks. Each.	Ducklings. Each.	Geese. Per lb.
Russia	1/6 to 2/9	2/3 to 2/9	—	5d. to 5½d.
Belgium	—	—	—	—
France	—	—	—	—
United States of America	—	—	—	—
Austria	—	—	—	—
Canada	—	—	—	—
Australia	—	—	—	—

IMPORTS OF POULTRY AND GAME. MONTH ENDING DEC. 31, 1911.

FOREIGN GAME. LONDON MARKETS.	Price Each During Month.	COUNTRIES OF ORIGIN.		DECLARED VALUES.
		Game.	Poultry.	
Capercailzie	1/3 to 1/6	—	—	—
Black Game.....	0/11, 1/1	—	—	—
Partridges.....	1/0 " 1/2	—	—	—
Quail	—	—	—	—
Bordeaux Pigeons	1/0 " 1/6	—	—	—
Hares	—	—	—	—
Rabbits	0/5 " 0/8½	—	—	—
Sniipe	—	—	—	—
Totals	—	£5,678	£258,071	—

IRISH EGGS.

DESCRIPTION.	1st Week.		2nd Week.		3rd Week.		4th Week.	
	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.
Irish Eggs	13/0 to 15/6	12/6 to 15/0	12/6 to 14/0	12/6 to 14/0	12/6 to 14/0	12/6 to 14/0	12/6 to 14/0	12/6 to 14/0

FOREIGN EGGS.

DESCRIPTION.	1st Week.		2nd Week.		3rd Week.		4th Week.	
	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.	Per 120.
French ...	12/6 to 16/6	12/6 to 16/6	12/6 to 16/6	12/6 to 16/6	12/6 to 16/6	12/6 to 16/6	12/6 to 16/6	12/6 to 16/6
Danish ...	17/0 " 18/6	17/0 " 18/6	17/0 " 18/6	17/0 " 18/6	17/0 " 18/6	17/0 " 18/6	17/0 " 18/6	17/0 " 18/6
Italian ...	13/0 " 14/6	13/0 " 14/6	13/0 " 14/6	13/0 " 14/6	13/0 " 14/6	13/0 " 14/6	13/0 " 14/6	13/0 " 14/6
Austrian ...	9/6 " 12/0	9/6 " 12/0	9/6 " 12/0	9/6 " 12/0	9/6 " 12/0	9/6 " 12/0	9/6 " 12/0	9/6 " 12/0
Russian ...	10/0 " 11/6	10/0 " 11/6	10/0 " 11/6	10/0 " 11/6	10/0 " 11/6	10/0 " 11/6	10/0 " 11/6	10/0 " 11/6

IMPORTS OF EGGS. MONTH ENDING DEC. 31, 1911.

COUNTRIES OF ORIGIN.	Quantities in Gt. Hund.	Declared Values.
Russia	811,864	£302,511
Denmark	304,968	£208,815
Germany	74,000	£31,467
Netherlands	22,585	£12,086
France	20,008	£10,891
Italy	31,044	£18,270
Austria-Hungary	80,588	£37,738
Other Countries	189,409	£70,839
Totals.....	1,534,466	£752,617

TRADE NOTICES.

An Attractive Catalogue.

Major Barnes, of Stonecroft, Ipswich, has sent us a copy of his really beautiful catalogue for 1912. No expense has been spared in producing an excellent booklet, and we advise our readers to send at once for a copy. On this page appears a photograph of a corner of the home farm, reproduced by kind permission.

The Clock House Catalogue.

Mrs. Trevor Williams, of the Clock House Poultry Farm, Byfleet, Surrey, has favoured us with a copy of her new catalogue for 1912. It is excellently produced, and contains just those things which the would-be buyer wants to know. Besides this, some very excellent photographs are included. The catalogue is well worth seeing.

was written for the I.P.R. by H. V. Tormohlen, a well-known American writer, who sent us the original drawing. We are quite sure that Mr. Tormohlen is as innocent as we are of any desire to infringe a copyright.

An Egg and Hatching Register.

We have received from Messrs. A. Thorpe and Sons, of Rye, Sussex, the well-known poultry and game food manufacturers, a copy of an egg and hatching register, arranged in a most convenient form, and well bound in stiff covers. Many thousands of them have already been sent to their customers, but we understand there are still a few left, and these will be sent to all new customers on receipt of their orders.

A Mammoth Incubator.

What is undoubtedly the largest incubator ever built in



A CORNER OF THE HOME FARM, STONECROFT, IPSWICH.
Reproduced by permission of Major Barnes from his 1912 Catalogue.

Spratt's Calendar.

A very attractive calendar is that sent to us by Messrs. Spratt's Patent, Ltd., of 24 and 25, Fenchurch Street, E.C. An endeavour has been made—and made successfully—to improve upon its many predecessors, not only from an artistic standpoint, but in general interest, and we would draw special attention to the letterpress at the back. This calendar is certainly one of the best we know of, being very attractive in appearance and very conveniently arranged. Readers should send for a copy before the supply is exhausted.

A Trap-Nest.

We have received a letter from Messrs. R. Toope and Co., of Stepney Square, London, pointing out to us that the drawing of a Home-made Trap-Nest, which appeared, with a full description, on page 164 of the January issue of the ILLUSTRATED POULTRY RECORD, is an infringement of their copyright. We are very sorry if we have in any way infringed a copyrighted design. The article in question

this country was on view at the works of Messrs. R. Toope and Co., of Stepney Square, E., during December. It has been built by Messrs. Toope and Co. to the order of Miss Gillett, of Walpole Hatch, Halesworth, Suffolk, and possesses the extraordinary figure of 2,500-egg capacity. This mammoth machine is 28ft. long, 4ft. 6in. wide, and 4ft. high. It will be heated by 350ft. of iron piping, the heat being generated by six lamps attached to a boiler. These lamps are to be fed with petrol. Messrs. Toope informed our representative that experimental though the building of such a huge machine had been to them, so completely successful had it proved itself that they feel they could now undertake the building of a 10,000-egg incubator, or an even

Owing to pressure on our space we have had to hold over some of our usual features.—Ed. I.P.R.

larger one. Messrs. Toope feel proud of their achievement, especially so since experience in actual working has proved it keeps its heat splendidly and uniformly. They will shortly issue leaflets for machines of larger capacity.

The Bottisham Poultry Farm, near Cambridge.

Mr. J. Stephen Hicks, a valued contributor to the ILLUSTRATED POULTRY RECORD, has sent us a copy of his new catalogue, containing full particulars of his various breeds and strains. Some striking testimonials are published. Apparently Mr. Hicks knows how to satisfy his customers.

A Well-known Yokohama Breeder.

Mrs. Prideaux, of Lindfield, Sussex, writes: "The Rev. C. H. Hildebrand having entirely given up Yokohamas, I have bought his stock. Anyone wishing for *his* birds should apply at once, and I will see that they have them. I shall sell them off as soon as possible, as I am overcrowded with those birds as well as my own stock. Among the latter I have many prize-winners and birds of imported parentage, both Duckwing and White." We are glad to know that Mrs. Prideaux had a most successful season in 1911, and her sales were excellent.

Mr. and Mrs. Pyne's Exports.

We are glad to learn that Mr. and Mrs. P. T. Pyne, of Ravenscar, Yorkshire, have recently shipped large consignments of fowls to British Columbia and to Holland, while a large package of poultry appliances has been sent to New Zealand.

Messrs. William Cook and Sons' Exportations.

Messrs. William Cook and Sons, Originators of all the Orpingtons, have shipped the following from their only English address, Orpington House, St. Mary Cray, during the past three weeks:

Per ss. Minnehaha, to New York, twenty-five White Orpington cockerels; per ss. Armenian, to Winchester, Mass., two White Orpington cockerels; per ss. Clan Robertson, to Port Louis, Mauritius, a pen of White Orpingtons; to Armemasse, France, a pen each of Houdans and White Leghorns; per ss. Laurentic, to Toronto, two pens of White Leghorns; per R.M.S. Amazon, to Santos, a pen each of Buff Leghorns and Buff Orpingtons; per ss. Peninsula, to Lisbon a pen of Barred Rocks; to West Africa, two Toulouse ganders and two pens of Buff Orpington ducks; to Paris, a Buff Orpington drake; to Bremen, a trio of White Orpingtons; per ss. Britannia, a trio of Blue Orpington fowls; per ss. Arana, to Bilbao, a pen of Black Leghorns; to Hungary, Buff Orpington pullet; per ss. Inanda, to Harrismith, a pen of White Leghorns; per ss. Ancona, to Lisbon, a pen each of Silver Wyandottes and Barred Rocks; per ss. Inyati, to Durban, a pen each of Jubilee Orpingtons, Buff and White Orpingtons, White Leghorns, White Wyandottes, also two American Mammoth Bronze Turkey cocks.

Mr. Tamlin's Exports.

The following is a list of Mr. W. Tamlin's exports for December, 1911: Three 100 incubators, three 60 incubators, three 100 foster-mothers, to H. Mascarenhas, agent for Portugal; one 200 and four 60 incubators, two 30 egg ostrich incubators, ten 60 foster-mothers, ten 100 foster-mothers, to Fernand Colman, agent for Belgium; one 100 incubator, to Catalina Solervicens, Spain; six 100, six 60, and ten 200 egg incubators, five 100 foster-mothers, to M. Andre Masson, agent for France; one 60 incubator, to Chili, per order of John Haddon and Co.; one 100 incubator and one 60 incubator, to J. Noakes, Monte Video; one 60 incubator, to P. A. Day, Freemantle, West Australia; one 60 incubator and one 100 foster-mother, to Thos. Wemyss, Barbadoes; one 100 incubator, one Surbiton poultry-house, one cramping machine, to P. W. Yetts, Natal, South Africa; three pens Black Orpington fowls, to J. Sanderson, Freemantle, West Australia; one 30 and one 60 egg incubator, to Mrs. Petrie, Bombay, India.

OUR BOOK MARKET.

Any of the following books will be supplied at the prices named. Cash must always accompany orders.

Amateur Poultry-Keeper. By W. M. ELKINGTON. 120 pages. Fifteen illustrations. Price, 1/2 post free.

Incubators and their Management. By J. H. SUTCLIFFE. Fifth Edition. Illustrated. Price, post free, 1/2.

Lett's Poultry-Keeper's Account Book. Edited by LEWIS WRIGHT. Cr. 8vo. Post free in the United Kingdom, the Colonies, and foreign countries, 2/8.

Poultry and Egg Raising at Home. By W. M. ELKINGTON. Illustrated. Price, post free, 1/2.

Poultry Culture for Profit. By Rev. T. W. STURGES, M.A. Third Edition. Cr. 8vo, 134 pages. Fully illustrated. Post free in the United Kingdom, the Colonies, and foreign countries, paper covers, 1/3; cloth, 1/9.

Poultry Fattening. By EDWARD BROWN, F.L.S. Fifteen illustrations, 120 pages. Price, 1/2 post free.

Poultry for Prizes and Profit. By JAMES LONG. New Edition. Revised by W. M. ELKINGTON. Illustrated. Post free 6/4 in the United Kingdom; in the Colonies and abroad, 7/6.

Poultry-Keeping as an Industry for Farmers and Cottagers. By EDWARD BROWN, F.L.S., Secretary of the National Poultry Organisation Society. Sixth Edition. 4to, 206 pages, fully illustrated. Post free in the United Kingdom, 6/6; 6/9 to the Colonies and foreign countries.

Popular Poultry-Keeping. By W. M. ELKINGTON. Illustrated. Price, post free, 1/2.

Possibilities of Modern Poultry-Farming. By J. STEPHEN HICKS and W. H. G. EWART. Price, 1/1½ post free.

Progressive Poultry Culture. By ARTHUR A. BRIGHAM, B.S., Ph.D. Illustrated. 300 pages. Post free, 6/6.

Races of Domestic Poultry. By EDWARD BROWN, F.L.S., Secretary of the National Poultry Organisation Society. 4to, 234 pages, with chapters on breeding, fully illustrated. Post free in the United Kingdom, 6/6; 6/9 to the Colonies and foreign countries.

Record Poultry Book. Nine illustrations. Written by Experts. Post free, 1½d.

Record Poultry Book. Nine illustrations. Written by Experts in Welsh. Price, post free, 1½d.

Report on the Poultry Industry in America. By EDWARD BROWN, F.L.S. Third Edition. Fully illustrated. Price, post free, 1/3.

Report on the Poultry Industry in Denmark and Sweden. By EDWARD BROWN, F.L.S. Fully illustrated. Price, post free, 1/3.

Report on the Poultry Industry in Belgium. By EDWARD BROWN, F.L.S. Fully illustrated. Price, 1/-; post free, 1/2.

The New Book of Poultry. By LEWIS WRIGHT. Demy 4to, 600 pages, with many coloured plates, &c. Post free in the United Kingdom, 21/10; 24/- to the Colonies and foreign countries.

The Poultry Manual. By Rev. T. W. STURGES, M.A. 600 pages, 52 illustrations. Price, 6/6 post free.

Report on the Second National Poultry Conference, 1907. Edited by EDWARD BROWN, F.L.S. 382 pages, with nine illustrations. Post free in the United Kingdom, 5/6; in the Colonies and foreign countries, 6/-.

The Practical Poultry-Keeper. By LEWIS WRIGHT. Cr. 8vo, 320 pages, with eight coloured plates and other illustrations. Post free in the United Kingdom, 3/10; 4/- to the Colonies and foreign countries.

THE ILLUSTRATED POULTRY RECORD,
TUDOR HOUSE, TUDOR STREET, E.C.